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ABSTRACT

Guidance for distance teaching media selection, management, and program organization is offered in this two-part manual. Each of eight units includes questions to be addressed, behavioral objectives, comments, exercises, and assignments. The first unit, a general introduction to distance teaching, is followed by four units covering distance education media, i.e., choosing what media to use; managing print; managing radio broadcasts and audio recordings; and organizing student services. Different ways of organizing media and advantages and disadvantages of each approach are examined. The importance of external factors--e.g., the distance teaching program's context, intended students, and purposes--is stressed both for selecting media and for determining how they should be organized. The second part examines how these choices are reflected in the organization of the whole program, and how the various parts and media fit together into an overall administrative pattern. Individual units address external organization, relations with other organizations, and determining costs and budget. (LMM)

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# ADMINISTRATION OF DISTANCE-TEACHING INSTITUTIONS

## a manual

**compiled by Tony Dodds**

International Extension College
1983

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# Acknowledgements

Most of the material in this manual was produced in a workshop of International Extension College staff, with people writing drafts of units and passing them round for reading and redrafting by others. Decisions about what to put in, and in what order, were jointly reached.

We should like to acknowledge our debt to the institutions we have used as illustrations and examples, particularly the British Open University, the Lesotho Distance Teaching Centre, the University of Lagos Correspondence and Open Studies Unit, the National Extension College, the Botswana Department of Non-Formal Education and the Mauritius College of the Air.

We are also grateful to our students at the University of London Institute of Education, who helped us to test an earlier version of the manual.

# About this book

This manual is intended for people who are working, or about to start work, in distance-teaching institutions, and who need to know how the activities of such an institution are (or can be) organised. You may be helping to set up a new college, or taking over responsibility for a department you don't know much about, or looking for ways to improve the efficiency of an organisation you have worked in for some time.

The manual's purpose is to help you to run a distance-teaching organisation successfully. You can work through it on your own, or as part of a group of people learning together, or as a correspondence course. However you use the manual, try to find opportunities to discuss the work you are doing with colleagues, either informally or in seminars.

## How to use the book

The manual has three parts: this volume, an accompanying volume of case studies and a course production game. The case studies and the game have their own introductions.

This main volume is divided into two parts, and contains eight units. Unit 1 is an introduction to the whole subject of distance teaching and is followed by Part I, on the media of distance teaching, and Part II, on the organisation of distance teaching, each with its own short introduction.

We suggest that you start your study of each unit by reading the first section, and then glance quickly through the rest to see how much there is to work through and how many exercises you will be expected to do. Then start again at the beginning of the unit, studying it slowly, doing the written exercises and reading any case studies which may be referred to. The order of the units is the one we think makes most sense for someone working through them, particularly if you do not have much experience in distance teaching, but if you want to you can use them in a different order. You may want to study some units more carefully and in greater detail than others.

You will find that it takes several hours to work through each unit and its assignment. In a workshop, you should expect to spend about a day studying and discussing each unit; working alone, you should be able to complete one unit a week if you spend an hour or two a day studying.

Every unit starts with a list of the questions it will deal with and a numbered list of its behavioural objectives - the things you should learn to do by working through it. And every unit ends with a section headed What have we learned? which sums up its content.

The text of every unit includes some parts which are enclosed in boxes, like this paragraph. The boxes may have any of these headings:

EXERCISE

COMMENT

CASE STUDY

ASSIGNMENT

Exercises: All the units contain exercises, but some have only two or three and some as many as seven or eight. They are designed for you to work on as you come to them in the text, using what you have learned in the preceding pages. The exercises are laid out so that you can complete them by writing in your book and you do not need to regard all of them as compulsory. Some of them are intended only for people who are especially interested in a particular topic We have tried to leave enough blank space for your answers. But if you want to write more than the space will allow, or you are sharing your copy of the manual with other people, you can do the exercises in a separate exercise book. The important thing is to work through them as you reach them, not to wait till you get to the end of the unit. When you have written your answers to an exercise, consult the Comment which appears beneath it, so that you can see what our suggestions are.

Some of the exercises, especially those at the beginning of each unit, may seem very easy for you: their purpose is to help you to focus your attention on the topic or on the problems which a particular kind of administration attempts to solve. We advise you not to spend much time on them, but not to leave them out completely. Other exercises are intended to help you to relate general information to your own particular circumstances. We cannot know, or cater for all these different sets of circumstances; on the other hand, it is not much use studying administration only in theory or in general, so we strongly recommend that you spend time working thoroughly through exercises which ask you to relate problems or suggestions to your own situation.

Case studies: From Unit 3 onwards, you will also come across references to case studies, which you will find in the second volume of this manual. You do not need to read every single one of these. They are designed to illustrate particular aspects of administration, and you will often be asked to choose from a group of three or four case studies the one which is most relevant to your own interests. Sometimes we have provided a Comment after a reference to case studies, and sometimes not. Often you will be asked to use the information in a case study to answer questions in an exercise.

Assignments: At the end of every unit there is a more substantial piece of work for you to complete. You should try to do all of these. Each assignment covers a unit as a whole, and gives you an opportunity to relate the general themes discussed to your own particular circumstances, or to an organisation or project invented for the purpose. We have not left space for you to write your answers in the book, partly because they may be quite long, but mainly because we want you to show your assignments to at least one other person working in your organisation, and to discuss them with any other people who may be working through the manual at the same time as you are. Because of their nature, we cannot provide comments on the assignments, and discussion with colleagues may turn out to be the most valuable component of your work on the manual.

Using the manual as a correspondence course: We expect that this manual will usually be read and studied by distance-teaching staff on their own or in small groups, or used in staff training courses. The International Extension College is, however, prepared to treat it as a correspondence course for any readers who wish to use it in this way. If you do, you should write to us before you start (to the address below) for further details. Essentially you will send each completed assignment to us as you do it, and we will comment on your work as helpfully as we can when we send it back to you. To do this we will need to know something about you and your work, so when you write to us please give us as much detail about yourself and your organisation as possible. We will, of course, have to make charges to cover postage, tutorial and clerical costs.

The course production game: You will find the game and the instructions for playing it in a separate folder. If you are working through the manual in a group with others, we want you to try playing it when you get to the end of Unit 3. You will find an explanation of its purpose there. If you are using the manual on your own, perhaps you can persuade two or three of your colleagues with experience of producing printed materials to play the game with you.

If you have any comments on the manual, especially about parts which are unclear or could be improved, we should be glad to hear from you. Please send your suggestions to:

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# Unit 1: An introduction to distance education

This manual is about administration: about how you make things work. It is not, for the most part, about questions of educational philosophy or method. In the units which follow we shall look first, in Part I, at the main activities and functions of a distance-teaching institution and how they work, and then, in Part II, at the administrative arrangements which are necessary for them to be effective. The purpose of the manual is to help you to make informed decisions about the administration of distance education. Such decisions affect the nature and success of educational policy. We think it is vital that such decisions are made by people who have some knowledge of the nature, problems and potential of distance education.

This unit is an introduction to Parts I and II. In it we shall be dealing with such questions as:

What is distance education?

What are its advantages?

What are its problems and constraints?

What kind of institution do we need?

At the end of the unit you should be able to:

1. explain what we mean by distance education in this manual and give your own definition;
2. discuss the role of distance education for a variety of educational purposes;
3. discuss its educational and economic strengths and weaknesses as a means of achieving such purposes;
4. differentiate between the main kinds of institutions which provide distance education.

## What is distance education?

As long as people have been able to write - or even draw pictures - they have tried to use those skills to send messages to other people. The invention of printing and, in this century, broadcasting, have enabled us to develop new methods of communicating with people who are not face-to-face with us. These techniques have also made it possible to communicate with very large numbers of people through a single act of writing or broadcasting - very many more people than a teacher, or a lecturer, could teach in a lesson or a lecture.

Attempts have been made since the 1920s to use print and broadcasting in an organised way to teach people at a distance. At first, these media were used separately for education. Recently, however, many projects have set out to combine print and broadcasting for educational purposes. And there has been growing recognition that occasional meetings between students and tutors help to make it easier to learn from printed or broadcast materials. Several different expressions are used to describe these various activities. Here are some examples.

> **Correspondence education** : Traditionally, a teacher writes down the lessons which she or he would have taught in class, and these are sent by post to students who are not in class; the students read them, do the exercises and send them by post to their tutor who corrects them and sends them back, with comments. It has been mainly used for academic and commercial courses, but it is also used to teach vocational subjects and, in a few cases, agriculture, health and hygiene, and community organisation.
>
> **Educational or instructional broadcasting** : Usually the radio or television broadcasts support and enrich the work of teachers in class; in some cases the media actually take over from the teachers the main task of introducing new information; radio is also used for nonformal education, in, for instance, agricultural information broadcasts and health education programmes.
>
> **Independent study** : A system of learning in which the students study alone from printed, broadcast or tape-recorded materials, produced in advance; the name stresses the control the students have over their studies and the flexibility of time and place of study.

During the last few years the expression **distance education** has come to be used to include all these activities. We will use it in this manual to mean any system of teaching and learning in which the students are at a distance from their teachers for most of the time they are studying.

As Unit 5 stresses, however, distance education as we use the term can - and usually should - include some face-to-face study. In fact we shall argue that some form of feedback and reinforcement, preferably through contact between students and teachers or between students and fellow students, is an essential element.

EXERCISE A

Here are five examples of distance-teaching projects. Each is concerned with a different kind and level of education. They also use different methods or combinations of methods of teaching. After you have read them, draw up on page 5 a similar list, of your own, of five other distance-teaching projects. Try to find examples concerned with different kinds of education and which use different teaching methods.

Our list of examples of distance-teaching institutions

| Institution | Country | Courses/activities | Students | Main media |
|---|---|---|---|---|
| Allama Iqbal Open University (AIOU) | Pakistan | Primary, secondary and college teacher upgrading courses. University 1st degree and postgraduate courses. Functional courses (e.g. vegetable gardening, electrical wiring, soil problems and their remedies). | Underqualified primary and secondary teachers. Adult students with secondary level qualification entering for univ. degrees. Adult students with little or no formal education. | Correspondence courses, radio, TV, occasional face-to-face tutoring. |
| Accion Cultural Popular (ACPO) | Colombia | Basic education courses equivalent to primary education but based on adult curriculum, including: literacy and numeracy, agriculture, community organisation, child and family development. | Adult peasants in remote mountainous regions. Some of their children who cannot get into primary school. | Daily radio lessons, course textbooks and visual aids. Study-group meetings under leadership of monitors. |
| UNRWA/Unesco Institute of Education | Jordan (but also working with Palestinian refugees in neighbouring Arab countries) | Primary and preparatory school teacher training and upgrading courses. | Primary school teachers in schools in Palestinian refugee settlements. | Printed self-study courses and regular face-to-face seminars. |

| Institution | Country | Courses/Activities | Students | Main Media |
|---|---|---|---|---|
| Institut Africain Pour le Developpement Economique et Sociale (INADES) | Ivory Coast (also working in several other francophone West African countries) | Basic agriculture courses. Village courses. Development cadres training courses. | Peasants. Extension officers (government and voluntary). Development personnel. | Printed correspondence booklets, highly illustrated. Linked visual aids. Study groups. |
| Radio Mathematics Project | Nicaragua | Primary school mathematics courses (Grade I upwards). | Primary school children. | Family radio lessons. Limited printed lessons. Class listening during exercises under the classroom teacher. |

Now complete the table below with your own examples. They do not need to be from different countries.

Your list of examples of distance-teaching institutions

| Institution | Country | Courses/Activities | Students | Main Media |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

COMMENT

You can see from the list of examples you have compiled, together with our list, what a variety of programmes distance education covers. They include courses at secondary and university level. There are programmes of vocational training, basic education, health and agricultural education. You can also see how many different methods of teaching they use: print, radio, television, tape recordings, study centres, home experiment kits, study groups, postal services and so on. Some use one or more of these methods separately, others use them in a whole variety of combinations. But certain important common features emerge:

[illegible] None of the media of distance teaching is wholly satisfactory by itself.

2. Many successful institutions therefore use different media to support each other and to make up for each other's teaching limitations.

3. Most institutions include some form of occasional face-to-face contact between students or between students and their tutors.

4. Most of the students are adults and are studying part-time.

5. Most projects make use of existing resources - media and institutions - but combine them to teach more efficiently.

6. Most systems attempt to make education available to more people over a wider area than the traditional institutions can reach.

7. Distance teaching needs a means for feedback from learners to their tutors; without this it is likely to be neither effective nor enjoyable.

Running a distance-teaching institution is primarily a matter of organising the different media in a systematic and complementary way so that they reach the students for whom they are intended and provide them with a satisfying and effective means of learning. The rest of this manual will look at some of the implications and complications of doing this.

## What are the advantages of distance education?

Over the last two decades distance teaching has grown rapidly in both rich countries and poor. Of course correspondence colleges have existed for longer than that. Radio has been used for education since about 1920, and television was used for direct teaching in the USA almost as soon as it was invented. But most of this was peripheral to the mainstream of educational development. What is new is the recognition that print and broadcasting can be organised to carry out major educational jobs. What has led to this recognition?

A. The most obvious factor has been political pressure for the expansion of education. In industrialised countries, where universal education already exists at primary and secondary levels, the pressure for expansion has been on higher education and for second chance facilities for adults. In third world countries it has been to provide primary or secondary level opportunities for all, or most, of the population, or to support extension services. In both cases distance teaching has been seen as one possible way of expanding opportunities quickly. For example, in Britain the Open University was created to increase opportunities for adults to obtain university education. In Zambia and Malawi the governments have established national correspondence colleges to provide secondary education facilities for young adults who have been unable to obtain places at secondary schools.

B. At the same time ministries of education the world over have been searching for ways of raising the quality of their education and the standards of teaching; or at least they have tried to prevent rapid expansion from leading to a fall in standards. Improvements in quality are often equated with an increase in the number of qualified teachers, an improvement in the teacher/pupil ratio and the availability of good study materials. Many of the new distance-teaching institutions have been set up to upgrade teachers, to increase the numbers of teachers and to provide supportive teaching materials. The Pakistan Allama Iqbal Open University, for example, runs a primary teacher orientation course using distance teaching, and in Tanzania there is an initial teacher training scheme using distance-teaching methods, to provide enough teachers for the introduction of universal primary education.

C. In nonformal education for adults, a major obstacle to traditional face-to-face methods is geographical isolation. Potential students are scattered in villages many miles from the towns where most educational institutions and extension officers are situated. The students cannot reach the teachers, and the teachers cannot reach the students often enough for regular classes. Distance teaching can reach into the homes or the communities of the learners, in the form of radio programmes, self-study pamphlets or correspondence courses. These can reach farmers to teach about agriculture, parents to teach about child health, or co-operative committee members to help them to learn about their duties. For example, the Institut Africain pour le Developpement Economique et Sociale in the Ivory Coast runs a correspondence course on better farming, and the Tanzanian Co-operative College runs various correspondence and radio courses on co-operative education.

D. There have also been more radical criticisms of the traditional system of education. These have been aimed at schools and colleges, which cut their students off from the world they are supposed to be learning to live in, and at their curricula, which have proved to be increasingly irrelevant to that rapidly changing world. Attempts to change the structure and content of education need techniques which maximise the students' ability and opportunities to relate what they are learning to the lives they are living. They must enable students to exercise more control over what and how they learn, and to join with fellow students and tutors in decisions about using what they have learned. Distance teaching has been used in some institutions to try to bring about such changes. For example, INCE in Venezuela runs apprenticeship training programmes for mechanics by correspondence and the Mauritius College of the Air introduced woodwork and agricultural science courses into secondary schools by multi-media programmes.

E. Expansion and improvement cost money. With orthodox education, the cost rises as the number of students increases. But many educational budgets are stretched to the limit. Educational planners are therefore attracted by a technique which increases opportunities for education without increasing costs in proportion. The most telling argument in favour of distance education is that it can help to do this. This claim is based on the following assumptions:

1. Distance teaching makes it possible for a few teachers to reach large numbers of students.

2. It does not require new schools to be built for expansion to take place; it can rely on the spare-time use of existing buildings and equipment.

3. It makes it possible for students to learn while they continue to earn; they do not need to be removed from their productive activity while they study.

4. Finally, and most important, distance teaching can achieve economies of scale; once the teaching materials have been produced and the system established, additional students can be enrolled with only marginal cost; the more students there are, the lower the cost per student.

EXERCISE B

(a) Which of the following kinds of education are being expanded in your country, or are about to be expanded? Are distance-teaching methods in use or proposed? (Tick each column as appropriate.)

| TYPE | Due for expansion | Due to use distance teaching |
|---|---|---|
| Primary education | | |
| Secondary education | | |
| Teacher training | | |
| Technical/vocational education | | |
| Agricultural education | | |
| Adult basic education | | |
| Health education | | |
| Political/civics education | | |
| University education | | |

(b) Now list those using, or about to use, distance teaching and show which of the reasons discussed on the previous pages apply in each case, by putting ticks in the appropriate columns. The letters and numbers in the column headings refer to the paragraphs on the preceding pages.

| Type | A. Expand opportunities | B. Improve quality | C. Overcome isolation | D. Increase relevance | E. Economic | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 1 | 2 | 3 | 4 |
| | | | | | | | | |

COMMENT

In Zimbabwe, at the time of writing, the government has just introduced a major programme of teacher education which uses distance teaching; it also supports a programme of alternative secondary education through correspondence, and is looking at ways of using distance teaching for a new drive in functional literacy and numeracy. So, for Zimbabwe, at the beginning of 1982, the chart in part (b) of the above exercise would appear as follows:

| Type | Expand opportunities | Improve quality | Overcome isolation | Increase relevance | Economic 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|
| Teacher education | ✓ | ✓ |  | ✓ |  |  | ✓ |  |
| Secondary education | ✓ |  |  |  | ✓ | ✓ |  | ✓ |
| Adult basic education | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

The ZINTEC programme (Zimbabwe Integrated National Teacher Education Course) is an attempt to expand the qualified primary teacher force as quickly as possible and at the same time to re-orientate the teachers for a post-colonial, non-racist society. This has to be done without depriving the schools for any length of time of the teachers they have. But economic considerations have not been foremost in the planning of the programme. The alternative secondary education programme has grown up in co-operation with the commercial correspondence colleges on the basis of supervised study groups for young people who have failed to get places in secondary schools. There is, as yet, no attempt to increase relevance or ensure high quality education: its sole purpose is to expand secondary provision as cheaply as possible without expansion in the number of teachers, facilities or buildings. The government is currently developing plans for a major functional literacy and numeracy campaign for adults. The details are not yet known. At this stage it seems clear that the planners will try to use distance teaching to incorporate all the advantages into their plans;: expansion; improved quality and relevance; coverage of even the most isolated areas; all as economically as possible.

What are the problems and constraints in distance education?

We have considered the arguments in favour of distance education mainly from the central planner's point of view, and therefore primarily in economic terms. Most of its problems and difficulties, however, are experienced by the students. Let us consider some of their main difficulties.

1. The first is the problem of isolation. Students studying alone at home, far from their tutors, have no immediate source of help, no-one to answer questions about things they don't understand, no-one to seek encouragement from. In many cases they don't even have the support of fellow students experiencing similar difficulties. All they have are the cold and impersonal facts laid out in their printed

materials, the ephemeral encouragement and stimulation of broadcasts or delayed recourse to their tutors by post. It is of prime importance, therefore, for a distance-teaching system to make every possible effort to reduce the loneliness of the long-distance student.

2. A criticism levelled especially at correspondence education is that it encourages and depends on rote learning. The student who learns the lesson notes by heart and regurgitates them in the examination stands the best chance of success. This accusation has sometimes been well deserved. Correspondence education, by itself, is certainly a very good vehicle for teaching parrot-fashion repetition. But it does not need to be. It can be used to encourage active learning, and to help students to apply what they are learning at every stage to the world. The way in which the system is organised and the courses are designed can determine whether rote learning or active learning is the outcome of any distance-teaching programme.

3. Both these problems are compounded by the fact that most distance students have been outside formal education for some time, and may well have been unsuccessful students if they were ever in it. So their study skills are poorly developed, their approach to study is hesitant, and they lack self-confidence. Without a regular guide or tutor they are likely to make mistakes, become discouraged and to become dropouts or failures.

4. There is therefore a danger that distance education may be seen as, and allowed to become, inferior to orthodox education, to what is traditionally provided in schools and colleges. If in practice a distance-teaching system leaves its students isolated, and if its courses concentrate on the transfer of facts and encourage rote learning of those facts, then it is second best. It is the job of distance educators to ensure that what they are offering to students is not second best. That job depends on employing good academic staff to write, edit and teach courses. But it also depends crucially on organisation. In short, it depends on good administration.

5. The problem of isolation, the boredom that comes from rote learning and a common belief that distance teaching is inferior to traditional forms of education, often lead to a high dropout rate. The result can be very large enrolments in the first flush of enthusiasm for a new system, of which only a handful of determined self-educators keep going to the end of the course. This is a particular danger if the production and distribution system does not keep up with its students, so that their self-doubt and loneliness are increased by their college failing to get their study materials out to them on time. There is evidence that the regular delivery of materials, frequent contact between students and tutor, and the organisation of support services - such as broadcast student forums, study groups, study centres and other forms of human contact between students and the institution - can help students to persevere with their courses.

## EXERCISE C

Have you ever studied at a distance? (If not, do you know any students who have?) If so, on the basis of (their or) your experience list the main problems of the distance student, explain what effects they had on you (or them) and suggest ways of overcoming them.

| Problems | Effects | Ways of overcoming them |
|---|---|---|
| | | |

## COMMENT

These are real problems. They are often individual and personal problems. They will not go away or be solved by a naive faith in a fashionable educational technique. The strength of distance teaching is that it can use a variety of different media and a variety of ways of teaching and counselling students, in order to overcome these difficulties. The challenge to planners and administrators is to organise the media and the methods of individual or group contact which are feasible in a particular context, to compensate for each others' failings and to provide a student-centred system of education.

## What kind of institution do we need?

The strengths and weaknesses of distance teaching, which we have discussed above, to a large extent determine the nature of an institution set up to teach at a distance. It must find ways of combining the three approaches of print, broadcasting and occasional face-to-face tuition, which are its staple methods, into an effective teaching system. It usually comes into being in order to provide for rapid expansion of educational opportunity at minimum cost. As far as possible, it has to achieve this by using existing media, facilities and personnel. Its students are usually scattered and part-time. Often its teachers - its writers, its tutors, its broadcasters - are part-time too. It reaches its students through the part-time use of other institutions.

For this reason an important feature of most distance-teaching institutions is their organised relationships with other organisations: broadcasting bodies, government departments, schools, colleges, extension services. These can vary from total dependency on others, through the shared use of resources, to the provision of specified services to them. But very few distance-teaching agencies are wholly self-contained. Decisions about the degree of interdependence or independence that they maintain in the various aspects of their work are vital for their administrators, and must be constantly reviewed. This issue is discussed in greater detail in Unit 7.

Linked to these decisions are others about the balance between the employment of full-time and part-time staff to write and teach the institution's programmes. There are economic and sometimes quality advantages to the use of part-timers; there are control and speed arguments in favour of full-timers. We shall examine these in more detail in Units [illegible], 4, 5 and 6. The decisions any institution takes vary from programme to programme, from department to department and from time to time. They are - or should be - made in the light of educational quality, resources available and expected student numbers.

Also central to the form an institution takes are decisions about what media should be used for what programmes, and in what relationship to each other. Often the initial planners of an organisation have a clear picture of the central medium it is going to use: Prime Minister Harold Wilson saw the United Kingdom Open University as a television university (see Case Studies 1 and 13); Father Salcedo saw radio as central to his Colombian network of radiophonic schools (see Case Study 3); Bert Kaye believed that correspondence courses would be the only effective teaching medium for the Malawi Correspondence College. Such convictions tend to dominate the structure of the organisation when it is set up. The negotiations between the BBC and the UKOU to ensure adequate television time strongly influenced the way the initial courses were put together and the administrative, financial and constitutional arrangements for their production and distribution. Accion Cultural Popular (ACPO) of Colombia started by setting up a radio station at Sutatenza. The Malawi Correspondence College concentrated initially on the construction of a system to write and produce correspondence courses. But the OU now sees television as taking up less than 10% of its students' study time; ACPO is now among the biggest book publishers in Colombia and its newspaper, El Campesino, has the widest circulation of any newspaper in the countryside; and the Malawi Correspondence College has merged with the national educational broadcasting unit. It is important that initial decisions - and biases - about media emphasis are kept constantly under review, and that the possibilities for developing new media combinations, as well as the relationships and administrative structures needed to make such packages, remain open. We shall look in more detail in Unit 2 at some of the considerations which affect the choice of media.

A common dilemma facing distance-teaching administrators is the extent to which services and materials development should be centralised or delegated to some form of regional office network. In large countries, and for organisations with very large student bodies, this dilemma also applies to the production of print and broadcast materials - especially where there are language and cultural differences. It is particularly acute, however, in relation to the provision of face-to-face support services. One consideration, which is usually an argument for centralisation, is that of economies of scale - the more copies you produce of a single item, the less each copy costs, whereas the more individualised your services or materials are the more expensive they are. Another consideration is the nature of print or broadcasting media. We look at how you calculate costs in Unit 8 and at the nature of the media in Units 2, 3 and 4. The need for individual tutoring and counselling and different ways of providing it are examined in Units 5 and 6.

There are many other considerations which determine the shape and nature of an individual distance-teaching institution, but we think these four are the most important.

## What have we learned?

We have seen that distance education makes use of print and broadcasting, but should also include some face-to-face study.

Its advantages are:
A. it can expand opportunities for education;
B. it can improve the quality of teaching;
C. it can overcome the geographical isolation of many adult students;
D. it can make education more relevant to people's lives;
E. it can be comparatively cheap.

Its disadvantages include:
1. the isolation of its students;
2. that it lends itself to rote learning;
3. the hesitant approach to learning among potential students, who may have had little formal education;
4. prejudices against correspondence education which may lead to distance teaching being regarded as inferior;
5. the high rate of dropout among students.

These strengths and weaknesses shape the organisation of all distance-teaching institutions, as do the answers to the following questions.

> Do we want/have a self-contained institution or one heavily dependent on the services of others?
>
> Do/will we employ mainly full-time or mainly part-time staff to provide our students with courses, and what kind of balance do we want between them?
>
> What media do/will we use and how do they relate to each other?
>
> Which services do/should we provide from the centre and which from regional or local offices?

## ASSIGNMENT 1

We suggest you try to answer either A or B, not both.

A. Answer the following questions, which are based on those at the end of the unit, in relation to your own institution, or the institution you are about to establish.

1. List those services which your institution provides for its students and those for which it is dependent on the resources of other institutions. Why is the division what it is?
2. List the main categories of part-time staff which your institution employs. Why does it not employ full-time staff to perform these functions? Why does it not employ part-time staff for other activities?
3. List the media your institution uses, and what courses they are used for. If they are ever used together, how does your institution ensure that they relate to each other?
4. List the centralised and the decentralised services your institution provides. Why, in each case, are they centralised or decentralised?

B. If you are not working or have not worked for a distance-teaching institution, and are not very familiar with one, we suggest you read one of the following three IEC Broadsheets and then try to answer the 4 questions in (a) for the institution studied.

The Mauritius College of the Air: the first two years, by T Dodds, IEC Broadsheet on Distance Learning No. 6

Starting the Botswana Extension College, by H Perraton, IEC Broadsheet on Distance Learning No. 11

The Lesotho Distance Teaching Centre: five years' learning, by P Murphy, IEC Broadsheet on Distance Learning No. 16

(If you do not have easy access to any of these, they can be ordered from International Extension College, 18 Brooklands Avenue, Cambridge CB2 2HN, England.)

Your lists will probably not be very complete at this stage, and will differ so widely that we cannot make general comments without having read them. The purpose of this assignment is solely to help you to focus on some of the main organisational features of distance teaching. We suggest you keep the lists you have made with this manual and refer back to them as you work your way through its units. You should be able to correct or expand them as you proceed.

# PART I: THE MEDIA OF DISTANCE TEACHING

The first part of this manual looks at how to organise and manage the various methods of distance teaching. It contains four units. Unit 2 considers the choice of media for particular courses or projects. Unit 3 examines in detail the management of the production of print materials. Unit 4 looks at the management of radio broadcasts and Unit 5 deals with the organisation of student services.

# Unit 2: Choosing what media to use

In this unit we shall consider how we decide what media to use for any particular project. We shall try to answer the following questions:

Does any medium teach some subjects better than others?

Which media should we use?

Should we combine the media?

How should we select them?

By the end of the unit, therefore, you should be able to:

1. identify links between teaching and learning problems and different educational media;

2. match certain educational tasks to suitable media on the basis of their characteristics;

3. argue the case for multi-media education;

4. construct a list of suitable criteria for selecting media, apply it to your own project, and justify your choices.

Does any medium teach one subject better than another?

The idea of a multi-media slot machine is very attractive: put an educational problem into the slot, and out at the bottom comes a recipe showing which medium is best for solving it. Unfortunately, no-one has yet built one. Each medium has strengths and weaknesses, but these are not so clear, or so different, that we can say things like 'Always use television for teaching art' or 'Radio is no good for mathematics' or 'Print is no good for people who cannot read or write'. (There is, for example, evidence against each of these three statements.) The research that has been done is, in fact, inconclusive. Most of it suggests that any medium can be used effectively for almost any subject, if the students are well motivated and the circumstances favourable. We therefore have to be more pragmatic. In order to make the most of the advantages, and minimise the disadvantages of distance education, administrators need to answer two questions:

1. What combination of media can be used, in the particular circumstances of any given programme, so that they compensate for each other's failings, and between them provide a comprehensive teaching system?

2. How can distance education overcome the dangers of isolation and remain student-centred?

Which media should we use?

Although we have no multi-media slot machine, some generalisations about teaching media are possible. We shall next look at what students want from a distance-teaching organisation, and how different media can provide it. If you are not familiar with what different media can do, read the extract from IEC's Writing for distance education: manual reproduced on pages 19-21.

A distance-teaching organisation needs to provide a variety of different kinds of teaching or support to its students. We can classify them in various ways. We would suggest that it always needs to provide the first four of the following, and sometimes the last three.

1. It needs to teach students the subject matter of their courses.

2. Distance students are often isolated, and the college needs to overcome that isolation. Learning from printed materials alone, for example, is a lonely and dispiriting job for many people and effective distance education demands some measures to counter that. The next point is related.

3. Students need encouragement and advice if they are to keep studying. Distant students can quickly lose motivation; the techniques used in ordinary classes to gain and hold students' interest cannot be used at a distance. Something else must be found instead.

4. Feedback is necessary. Students must have a means of communication with a tutor, or an extension adviser, in order to get help on their work, and to discover how well or how badly they are learning. Institutions need feedback so that they can improve their materials or their methods. Delayed feedback may be adequate, but sometimes students will need rapid feedback from a tutor if they have a problem they cannot solve, which totally stops their progress.

Often:

5. Students may need to change their attitudes, as well as learning new facts, or techniques, or skills. It is difficult to do this as an adult, more difficult as an isolated adult. But changes in attitude - as opposed to changes in knowledge - are often important in education.

6. Some of our students have a very limited background of formal education. Some may not be literate. It is necessary to overcome the learning problems of such students, and to do so despite the handicap of distance.

7. There are particular difficulties in teaching some subjects at a distance, for example practical subjects such as crochet, woodwork or car maintenance.

We shall now look at ways in which different media can help distance educators with these tasks.

## 1. What are educational media?

An educational medium is a channel of communication which is or can be used in an educational programme. Our definition includes all and every form of communication, not just the 'mass media' of broadcasting and the press. For the sake of convenience we can divide the media into three main groups, consisting of *printed, broadcast, face-to-face communication,* and a fourth which comprises *diverse forms such as cassettes, films, slides etc.*

## 2. Characteristics of different media

### 2.1 *Print*

- varied forms, including correspondence courses, instructional booklets, work cards, programmed texts, newspapers and magazines, posters, flipcharts, comic strips.
- permanence is an important feature of print. This can be both an advantage (useful as reference) and a disadvantage (goes out of date soon, mistakes can't easily be rectified once printed).
- print is of limited use to illiterates.
- print is cheap to produce and can take advantage of economy of scale.
- newspapers are specially useful for:
    - maintaining contact between scattered people (e.g. farmers, correspondence students)
    - providing varied and interesting reading matter where books etc. are scarce
    - providing a common focus of interest for a disparate group
    - teaching, especially where other forms of instruction are difficult to arrange (e.g. correspondence lessons in newspapers).
- posters and flipcharts may be the only visual media available for rural people. But these need to be used with care and to be well integrated with an associated verbal message.
- comic strips are a way of presenting a message in the context of a story. Because pictures and written story run side-by-side, comics are readily understood by people with limited reading skills. These can be very popular, and effective in getting people to think about their attitudes. But they are no use unless readers are familiar with comic strip style. Furthermore a verbal story-line is essential. Comic strips do not work with pictures alone.

### 2.2 *Broadcast media*

*Radio*

- has enormous potential, can cover very large audiences and reach isolated spots. In practice, however, range is limited by technical problems and by social factors such as language.

- it has varied applications including:
  * support to correspondence students
  * classroom materials
  * basic education for rural families
  * information services of various kinds
  * information for listening groups
- it is ideal for communication with illiterates. Some evidence exists however that illiterates listen to educational radio less often than literates.
- radio is fleeting, in contrast to print. There is no permanence about it, but it is good for conveying impressions and for illuminating topics readers are already familiar with.
- radio is good at creating dialogue - either within a listening group, or between listeners and the programme organisers. Similarly, tutorial broadcasts can be made for correspondence students, responding to commonly felt difficulties.
- radio is important for breaking the isolation felt by many distant learners. And any sort of personal contact (even a voice on the radio) is crucial for bringing about changes in attitude.

### *Television*

- problems of cost and maintenance inhibit the use of TV in many areas.
- features of TV are similar to those of radio, but visual element gives an added dimension, so
  * given a choice, people often prefer TV to radio, find it more interesting
  * TV makes it possible to use broadcasting for visual presentation (e.g. in geography or science subjects) which would otherwise have to be done in print.

### *2.3 Face-to-face contact*

- even small amounts of face-to-face contact make distance teaching more effective.
- face-to-face element is likely to be the most costly, so needs the most careful planning.
- face-to-face contact can be a very sensititve area. Some learners actually prefer impersonally presented information. And most can be put off learning altogether if they react adversely to the person concerned.
- we still know little for certain about what factors affect the quality of personal contact. What sort of people make the best communicators? How can we identify them? And how should they communicate? But we can say with reasonable certainty that

- people who are known and respected by the learners have the greatest influence when it comes to attitude change.
- it's sensible to make use of channels of communication which already exist (whether formal or informal) where these are appropriate, in preference to setting up new ones.

### 2.4 *Other media*

*Cassettes* are similar to radio; they have various disadvantages however:

- recurrent costs are higher than radio, therefore economies of scale are not possible
- cassette players and tapes usually need to be provided and distributed, while radios are usually already available.

Cassettes are useful:

- where the number of listeners is too small to justify expense of radio broadcasts
- where radio transmission is not possible for technical or other reasons
- where the possibility of stopping and replaying tape is important for educational reasons
- in special cases such as language courses, where listeners can tape themselves.

*Slides*

- these are a simple form of graphic presentation. The main item of cost is taking the photographs, but the slides themselves are easy and cheap to make and put together. However they are more expensive than flipcharts, over which they have no significant advantage.

*Films*

- these are expensive to produce and difficult to get right for educational programmes. But they can add entertainment value when used alongside other elements.

*Flannelgraphs*

- cut-out cardboard pictures which can be fixed to a felt board. These are cheap and easy to produce and useful for group study. Their advantage over flipcharts and posters is that the pictures can be changed to suit the occasion. Pictures can be moved about by learners as well as by group leaders. These have been used effectively to help rural people define their own educational needs and priorities.

**EXERCISE A**

We shall consider six media:

(a) correspondence course
(b) radio programme
(c) TV programme
(d) sound tape
(e) meeting with a tutor/extension adviser
(f) study group meeting

Which of the jobs described on page 18 can be done by each of these media and how? The problems are listed again below and there is a table in which you can put a tick where you think a medium can help, a cross where you think it can't or a question mark if you are not sure. The numbers across the top of the table refer to the list below. (NB. There are no right or wrong answers: it is all a question of degree.) Then think about how each medium helps.

1. Teaching subject matter

2. Overcoming isolation

3. Maintaining motivation and providing advice

4. Providing feedback

5. Changing attitudes

6. Overcoming problems of limited education

7. Teaching practical subjects

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|---|
| (a) correspondence | | | | | | | |
| (b) radio | | | | | | | |
| (c) television | | | | | | | |
| (d) sound tape | | | | | | | |
| (e) meeting with tutor/ adviser | | | | | | | |
| (f) study group meeting | | | | | | | |

COMMENT

Here are our suggestions. (Please note that we do not comment on all jobs for each of the media.)

(a) Correspondence course

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| ✓ | × | × | ✓ | × | ? | ? |

1. Teaching: correspondence courses can communicate clearly and effectively.

2. Isolation: the printed lesson does not reduce isolation, but helpful and friendly comments from the correspondence tutor can do so.

3. The printed lesson by itself is not good at personalising the lesson or sustaining motivation; the correspondence comments from the tutor, however, can help with both.

4. The correspondence part of the course is directly concerned with feedback: other aspects of the course can be changed or created on the basis of the students' reactions to it.

5. Correspondence by itself is not very good at changing people's attitudes, unless we have exceptionally good authors. Good writers can change attitudes: Martin Luther nailed up his theses proposing reforms in the mediaeval Christian church, he did not just talk about them. And his ideas spread because of print.

6. There are difficulties in using correspondence for people with very limited education.

7. Apart from its ability to include printed diagrams, it is not good at presenting practical topics.

(b) Radio programme

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| ? | ✓ | ✓ | ? | ✓ | ✓ | × |

1. Radio can teach, but many of us have difficulty in remembering what we hear over the radio unless it is reinforced through some other medium.

2/3. Hearing the voice of a tutor, or of the course organisers discussing the course and her problems, can help the student to feel less alone. Radio can also be used to introduce the voices and/or the questions of fellow students, a process which greatly increases the student's sense of involvement and belonging.

4. Improving feedback: radio can be used to deal with problems raised by students in previous programmes. Most programmes cannot provide immediate feedback. Students can, however, take part in programmes, discussing questions with tutors. This is likely to bring up the problems which worry students at home and

is a good substitute for class contact.

5. Changing attitudes: bits of dialogue, drama, or even the style of address of the speaker can often challenge you to think, question your opinions, or pay attention to others' opinions more readily than the printed word.

6. One of radio's greatest strengths is its ability to reach and teach people who cannot read or write.

7. Radio is not good at teaching about practical topics. It can be used to create interest and motivation in them by reference to examples.

(c) TV programmes

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| ? | ✓ | ✓ | ? | ✓ | ✓ | ✓ |

1. As with radio, a good teacher can teach or explain something effectively on television. For many people, to be able to see someone explaining something may be an advantage. And for some subjects there are advantages in being able to see as well as hear.

2-6. as for radio. Television is also more spectacular. For this reason, particularly where it is still quite new, it can strengthen students' motivation dramatically.

7. Television is also good at demonstrating practical activities. It is difficult, however, to remember instructions, movements or actions from television pictures.

(d) Sound tape

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |

1. Tape recordings have the enormous advantage, in teaching, that they can be stopped, started and repeated according to the needs of the individual students. If one student, or a group, forgets or does not understand what is said the first time, it can be repeated.

2,3,
5,6. As for radio.

4. As in radio, with the added advantage, if the students can record, that they can speak their reactions and send the tape if they have difficulty in expressing themselves on paper. It is also particularly useful in language teaching.

### (e) Meeting with a tutor or extension adviser

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| × | ✓ | ✓ | ✓ | ? | ✓ | ✓ |

1. We do not think that occasional meetings with a tutor or adviser are an efficient method of teaching any subject matter. Even in a school or training centre students must read books or discuss and think about their problems and suggested solutions between lessons. If the meetings are only occasional and short, this is not possible. As the time is so precious, direct teaching of the subject matter might be a wasteful way of using it.

2/3. Meetings with tutors and the encouragement and help with students' problems which these can provide are the most powerful ways of overcoming isolation and strengthening motivation.

4. Such meetings are also, therefore, the best opportunities for providing feedback to students on their problems and their progress and to tutors on the effectiveness of the courses. Both are only possible if the meetings are organised so as to encourage dialogue, and are not lectures.

7. Supervised practical sessions are essential for practical learning. The occasional face-to-face meetings with tutor/advisers may be students' only opportunity for them.

### (f) Study group meeting

| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| × ? | ✓ | ✓ | ? | ✓ | ✓ | × |

1. Usually all the members are students. In most subjects they are not equipped to teach each other the subject matter they all want to learn. Often, however, the meeting provides the occasion for them to study radio programmes, tapes or printed materials together.

2/3. If no tutor is available, meetings with fellow students can overcome the sense of isolation and provide the help and encouragement (even just the knowledge that other students share the same problems) which strengthen motivation.

5. Attitudes are more likely to be changed through discussion with peers than through any amount of lecturing.

6. Study groups allow the better educated to help the less well educated to understand the materials. In some groups literate members read the printed materials aloud to illiterate members.

This exercise has suggested that there are some functions which particular medium can perform and others cannot. At the same time it shows that there are several ways of overcoming most problems. Our comments are by no means exhaustive, and are only a general guide. We suggest you now look back at the chart you completed and consider how, between them, a combination of media can carry out the seven jobs we listed on page 18.

We now need to look carefully at how we make decisions about which media to use for particular educational purposes, and how to combine them.

## Should we combine the media?

We have seen that some media are particularly good at certain teaching jobs. All the same we can teach most things using print alone. So we need to think rather carefully about adding costs and complications to projects. Let us consider the arguments for using more than one medium.

1. First we should understand that each medium can teach effectively. People can learn well from print, or radio, or television. (If you want to know more about this, read Joseph Trenaman, Communication and Comprehension (Longman, London 1967), which reports on research carried out in Britain on this subject.)

   But:

   some things are more difficult to communicate in one medium than another;

   some things cannot be done at all well in print.

   We leave you to think up some examples here, drawn from your own experience.

2. Using more than one medium can improve motivation. First, we can introduce a variety of approaches, to stimulate and maintain interest. Second, broadcasts can force a steady pace of study, keeping students going.

3. A combination of media improves access. More people can keep studying if they are offered alternative ways of doing so. Ideally, everyone uses all components of a programme to the full. In practice, if you have more than one study option, you have a better chance of keeping going. If you are studying from radio and print, you can use print alone if you miss a radio programme; or you can listen to the radio and skimp the printed lesson if you are short of time.

4. Using more than one medium helps to reinforce learning or understanding. If the same point is repeated in different ways, there is a better chance that you will grasp it. Also different people have different preferences or even different abilities or disabilities, which make one medium easier to use than another.

5. Using two media can be economical - in the teaching sense rather than the financial one. A wise use of a main medium of instruction together with a supplementary one can increase teaching effectiveness considerably.

6. Each medium, as we have seen, has its own disadvantages as a teacher. By using several, we can lessen or overcome their individual difficulties.

We have looked quite hard at the strengths and weaknesses of the most common distance-teaching media. We have stressed, however, that all of them can teach effectively, if used in favourable circumstances. How, then, do we choose what to use when, and what not to use?

## How should we select the media?

Here are five basic questions we should ask:

1. Which media are available, or can be made available to our expected audience?
2. Which media are best at achieving each of our educational objectives; and which combination will best achieve all of them?
3. Which media do our students have easy access to?
4. Which media can we afford to use for this course and this audience?
5. What is administratively possible at the time the course is due to be made available?

These are all questions which we have to answer before we make decisions. You may think of more which apply to all courses, or others which apply especially to projects with which you are involved.

### EXERCISE B

Suppose you are involved in developing materials for use in your own country on each of the following subjects. You can use print and up to three other media. Which would you choose?

| | 1 | 2 | 3 |
|---|---|---|---|
| Child health (for young mothers, with very little formal education, living in rural areas) | | | |
| Beginning English (for young adults who have completed primary school but failed to get into secondary school) | | | |
| Educational psychology (for practising but untrained primary school teachers) | | | |
| Motor mechanics (for young apprentices in roadside garages in urban areas) | | | |

COMMENT

We cannot take into account here the special nature of your particular country: what media are available to whom, or when. These are general comments which we think are applicable in many countries in the third world.

We would use radio in the first two courses. This is because they are likely to attract large audiences of people whose formal education is quite low. This might also apply to motor mechanics. In child health and motor mechanics we would accompany the radio programmes with flip charts, made up of pictures and diagrams illustrating the points made on radio, and serving as reference material for discussion and practical work after the programmes. In both we would arrange occasional practical sessions with trained health workers or motor mechanics. Basic English would also include cassette recordings of exercises for repetition and revision and, if possible, students would be encouraged to record their own attempts to speak English and send their recordings back to the tutor. Educational psychology might be accompanied by tape recordings of, for example, discussions of children's behaviour patterns in the classroom. Television or film of such behaviour would be excellent, but probably too expensive, and not available to teachers in most third world countries. If so, film strips or flip chart picture series illustrating the same behaviour, linked to the tape, would be substitutes. The course would also include self-help meetings of students who lived near each other, and sessions at residential vacation courses.

## What have we learned?

We have been looking at the different media used in distance teaching and thinking about what to use for different courses.

1. There is, unfortunately, no easy guide to which medium teaches which subject best.
2. Most media can teach effectively if used in favourable circumstances.
3. Most media, however, have certain obvious advantages and disadvantages.
4. We can usually make use of these advantages and overcome the disadvantages by combining media.
5. We should choose media which are available to us and to our students.
6. Our choice of media has far-reaching implications for the cost of our work and for the administrative structure of our institution.

## ASSIGNMENT 2

### Developing a good course

Take any distance-teaching course or project with which you are familiar. Analyse it against the checklist given below. Some of the questions may not be relevant to the project you choose, in which case cross them out. There may be other important questions which are not included; if so, add them to your list. On the basis of your answers to the amended checklist, decide what combination of media you would use for the course or project you have chosen, if you were about to launch it now.

### Checklist

What are your educational objectives?

What constraints do they impose?

What are the particular difficulties faced by your students?

What are the media available for use?

What are the constraints within which the project must work?

What media are available to the students?

What sort of situation will the students be studying in?

How many students are likely to use the course?

How will the course be organised and administered and by whom?

# Unit 3: Managing print

This unit examines how to organise the production of printed materials for teaching and learning. It discusses the following questions:

How are printed materials produced?

Who decides the content of a course?

What sort of writers should be employed?

What are editors for?

How and where should things be printed?

The objective of the unit is to enable you to make an informed choice between various alternative ways of organising print production. At the end of it you will be able to:

1. state who to consult when planning the content of your courses;
2. list the advantages and disadvantages of different patterns of course writing, e.g. full-time or part-time writers; individual writers or course teams;
3. write a job description for an editor;
4. describe and make choices between different departmental and supervisory arrangements for writing, editing and printing materials;
5. make informed choices between letterpress, offset litho or duplicating as a means of printing educational materials.

One of the main jobs of a distance-teaching institution is to produce printed materials. Other parts of an institution depend heavily on the print production unit. If materials are not produced and printed as required, then the institution cannot function. As a course develops from an idea to a set of printed materials, it goes through a process consisting of many stages. It is important that each person involved in this process is aware of his functions and responsibilities, and is sensitive to the needs of other members of the production team. It is also necessary for members of other departments to be aware of the constraints within which a production unit works.

## How are printed materials produced?

The work of producing printed materials generally involves four kinds of activities, and we shall look at each of these in turn later in the unit:

planning the curriculum;
writing the texts;
editing them;
typing and printing them.

Sometimes the first three processes will overlap. Let us spell out in more detail the steps to be taken in order to produce a text:

1. First the course or materials must be commissioned, in accordance with policy decisions adopted by the institution.
2. Writers must be identified and appointed.
3. New writers must be trained in the techniques of writing for distance education.
4. Materials must then be written and edited and illustrated.
5. They must then be prepared for printing; a design for lay-out is agreed and they are typed or set in print. The typescript is then checked, corrected and checked again.
6. The materials are printed, collated and bound together.
7. The materials are checked again and despatched to students.

A single production department in a distance-teaching institution may be responsible for all these steps, or in some cases its responsibility is limited to editing and printing, or just to printing. In some institutions all the jobs, from commissioning courses to getting them printed, are carried out within the institution by its own staff. In others some jobs are done by outsiders (part-time course writers, for example), while others are done by departments associated with the institution, but not entirely under its control (a university's print department, for example, may print correpondence courses for an external studies department along with other jobs for the university). Most distance-teaching institutions fall into the latter category, where some work is done externally. The manager of a production department is generally therefore required to control and co-ordinate work done both internally and externally. In order to ensure the smooth progress of the numerous stages of production, it is essential that all members of the department act as a team.

## Who decides the content of a course?

Once a decision has been made to run a course, it is necessary to decide on its content. We are not discussing the writing of curricula in this manual. But the administrator is faced with a set of questions about the content of a course. The first concerns who decides the content.

In a formal course, leading to an examination, the examination syllabus is usually the starting point for a course, but only a starting point. Examination syllabuses tend to be short and, while they are, by definition, an adequate guide to an examination, they are not a good guide to the best way of teaching a subject. So, for a formal course, more help is needed. There are at least six groups of people who may want to be involved in decisions about the choice of subject matter. They are:

the academic staff of the institution;
the course writers;
broadcasting producers, if there is to be a broadcast element;
the editor(s);
subject specialists from other institutions concerned with curriculum development;
the students.

At the earliest stage of planning it may be useful, or even necessary, to involve representatives of as many of these groups as possible. The institution needs to have a policy which defines how this is done, and who is responsible for doing it. As the course develops most of the work of elaborating the content will fall on the course writers and the editors.

Nonformal education is more difficult. There is seldom a syllabus of any kind. There is usually some kind of definition of an educational need, and the college then has to work out how best to meet that need through the development of a course. And, just as there may be subject panels for formal education, so, in the nonformal sector, we can often call for advice and information from rural development agencies and from the staff of ministries of agriculture, local government or rural development. There are two other important sources of information: if your project was set up as a copy of another, elsewhere in the same continent, as is often the case, you can go to the first project for guidance. And, for ideological and practical reasons, it makes sense to consult future students, or sample groups of future students, on nonformal courses.

Consultative course planning, such as that described for both formal and nonformal education, has three consequences for the administrator. First, it emphasises the importance of developing close relations with other agencies (a topic dealt with in Unit 7). Second, it means that the lead-time for preparing a course is likely to be longer than it would be for a formal course. Third, it means that we may have, on the staff, someone whose job is to develop the course, whose function is different from that of an editor or a writer. A course development officer may combine the skills and activities of a researcher, a writer, a producer and an editor.

Some institutions prepare materials for other organisations. In such cases the distance-teaching institution often has little or no influence over what is included in the materials, even though its pedagogical expertise and knowledge of the students equip it to do so. (For more details of such service agency work, see Unit 7 and Case Study 26.)

The administrator has two key functions at the early stage of course development: to minimise conflict between all the parties involved, and to get agreement on a reasonable budget and timetable.

EXERCISE A

Consider your own subject: this may either be something you have studied, or something in which you have a particular interest. Suppose that the institution where you work, or the institution you are planning, is to run a course in that subject. Assume, if you can, that the course will use both print and broadcasts.

(a) Where will the decisions of content be made, and by whom?

(b) What are the steps in the making of these decisions?

(c) Are there any constraints affecting what you can include in the content of the course?

COMMENT

In choosing subject matter, it is extremely difficult to draw demarcation lines between the responsibilities of people working for an institution and others with a say in the choice of content. Equally, it is difficult to draw a line between educational and administrative decisions. On educational grounds, course writers may demand a pattern of organisation which, on administrative grounds, their institution does not want or cannot afford. Second, both writers and editors are likely to have to live with a course until it is being used - and criticised - by students and tutors. There is therefore a lot to be said for involving them with course development from the earliest stage.

## What sort of writers should be employed?

By a writer, we mean anyone who writes lessons. In your institution you may call such a person a writer, a lecturer or a tutor. A writer may have other jobs within your institution as well as writing lessons. She may, for example, mark the exercises submitted by correspondence students, or give broadcast lessons as well as written ones. Our discussion here is limited to the job of writing, that is preparing the full text for the printed materials.

In your institution you may employ part-time writers, or full-time writers, or both. Full-time writers may be employed on a permanent basis, or for a limited term of one or two years. Both forms of employment have their advantages and disadvantages. Let us look first at the question of part-time writers.

When we appoint a part-time writer, we generally look for someone who is currently teaching the subject he is to write about to students who are, as far as possible, similar to the distant students he will be writing for. This is immediately a point in favour of the part-time writer; he is normally a practising teacher, in touch with students, and with the latest techniques and practical possibilities of teaching his subject. He is also able to try out on his own students any ideas he may develop for organising his teaching at a distance. In short, there is a good chance that he is able to teach well. Moreover, a part-time writer can work in his own time, in any place. The distance-teaching institution has the freedom to seek the best and most committed teachers to write its courses.

There is also an advantage to the distance-teaching institution. It can employ the writer on a temporary basis, for as long as it takes to do the job. It generally does not have to find working space for the writer. It is usually possible for an institution to employ a large number of writers part-time, when it simply would not be able to accommodate, or pay for, anything like as many full-time writers. But the arguments are not all one-sided.

## EXERCISE B

Take five minutes to list the possible disadvantages of employing part-time writers. (Use an extra sheet of paper if you need to.)

## COMMENT

From the writer's point of view, the experience of writing part-time may be rather like learning at a distance. He may feel isolated, unsure of what is expected of him, tempted to give up or to put off writing until he feels like it, gradually falling behind with his commitments like so many distant students. The fact that part-time writers are inevitably to a great extent outside the institution has a number of implications.

1. First, and most important, it may be difficult to find and appoint a good part-time writer. In countries with a shortage of educated people, good teachers and writers face many demands on their time. In many developing countries it is difficult to find part-time writers whose other commitments allow them to write courses. In contrast, in rich countries, there are many competent teachers, away from teaching for a few years, perhaps while their children are small, with time on their hands.

2. Co-ordinating the work of part-time writers may create more work for the institution; it will also be harder for writers to work as a team (see p.36).

3. There are problems in training part-time writers for distance education. Training must often be piecemeal, and may have to take place at a distance.

4. The institution has limited control. The only sanctions it has are financial and moral: it may refuse to pay a writer who does not deliver; or it can attempt to impress upon a writer the distress of the students who are waiting for a course. But, ultimately, it is taking a chance. The writer may not respond to suggestions from editors, he may turn out to be slow, and there are generally difficulties in keeping to agreed timetables. A part-time writer will generally be writing in addition to his normal full-time job and at times may not be able to devote much time to the course.

5. Part-time writers are generally offered a fixed fee for their work. It is not unusual for those new to writing for distance education to discover that the job is more difficult than they

expected. This sometimes results in bad feelings about payment, and the quality of writing may suffer.

6. The job of a part-time writer ends once a course is written. In some cases, writers may wish to continue their association with a course, revising and updating it where necessary. But there is no guarantee that they will wish to do so, and thus there is no long-term continuity in the maintenance of a course.

It is sometimes possible to employ full-time writers. There are, of course, advantages and drawbacks here, too.

EXERCISE C

List the advantages and disadvantages of employing full-time writers.

| Advantages | Disadvantages |
|---|---|
| | |

COMMENT

It may be easier to recruit a full-time writer, possibly on secondment, than a part-time writer. A full-time writer can get on with the job steadily, without having to rush. At the same time it is possible, with full-time writers, to produce courses or materials quickly. If she is employed permanently, a full-time writer can also maintain each course she writes in the long term. The institution is able to give the writer on-the-job training; writer and editor can work closely together; and scheduling is more certain than with part-time writers. But there are disadvantages too.

It may be difficult to find the right person to employ full-time, particularly on a short-term contract. Practising teachers are often wary of giving up teaching posts for a year or two, in case they cannot obtain the right sort of appointment or lose their place on the promotional ladder when they wish to return to teaching. It is difficult, too, to be sure that you have recruited the right person. This does not matter so much if you have appointed a part-time writer. You can easily sack him and pay him off. If you make a mistake in appointing a full-time writer, you then have to live with that mistake.

A compromise is to recruit full-time writers for a short period - six months, one year, two years - on secondment from the institutions or departments they regularly work for. This involves negotiation between the distance-teaching institution and the writer's regular employer. In Nigeria, for example, an arrangement has been agreed between the University of Lagos Correspondence and Open Studies Unit and the university's internal teaching departments, to second subject specialists to COSU as full-time writers, during the period of developing new courses. When they have finished they return to their departments without loss of status or promotional prospects. If a writer is appointed, on secondment, for a fixed period, however, you may be in difficulty if she fails to complete the course in the time available.

There are also psychological difficulties facing the full-time writer. Writers may rapidly get out of touch with ordinary students. Alternatively, they may find writing full-time so hard a job they they constantly try to get involved with other activities, at the distance-teaching institution or elsewhere. And there are problems when a writer has finished developing the course for which appointed. There may be no other courses to be written which she is qualified to write, and she may not be the right person to take up another job, such as editing or counselling.

On the other hand, if a full-time writer leaves her job the lack of continuity may cause problems in the revision of her courses.

So far, we have been considering the appointment of a single writer to write any one course. Most of what has been said applies if we are to recruit two writers who will share the job of writing between them. In some cases, however, we may recruit teams of writers to produce a course.

Two ways of running teams of writers have been developed. First, at the Open University in Britain most courses are written by a team of writers, who work under the leadership of a course chairman, with broadcast producers, an educational technologist, and an editor, over a period that may be as long as two years. Secondly, courses have occasionally been written by a small team of writers, generally between six and ten people, who work intensively for between one and three weeks, and complete a course in that length of time. In both cases the work is shared between the members of the team, each member writing a section. But at regular intervals they discuss each others' work, as well as the course as a whole, to ensure that it has cohesion.

CASE STUDIES

If you want to study either way of writing in more detail, look at Case Studies 1 and 2.

COMMENT

The OU course team has particular advantages where the course crosses subject boundaries. A course on genetics and society, for example, may need both geneticists and sociologists among its authors. If you have more than one author, you can draw on a wider range of experience of teaching the subject, and get access to a wider range of examples to use in it. The course team also provides a forum within which conflicts between writers, and between writers and producers, can be resolved. There is, however, a danger that the course will reflect the opinions of the more dominating members of the team, who are not necessarily the most perceptive. Moreover, prose written by a committee is likely to be less vivid than prose written by a gifted individual (though team writing is not necessarily committee writing). Some courses will therefore be better written and some worse, than they would have been if individually written. In practice, course teams probably work more slowly than individuals, and their costs are therefore higher.

As experience in southern Africa shows, there are circumstances in which a small team can work together for a short period intensively and produce a course very quickly. Such a course most probably demands much more editing work than a course written by an individual, or a course written by a team over a longer period. But it may be possible to bring together subject specialists for a week or two, whom you could not recruit, part-time or full-time, for the months in which the Open University-style course team would work. For a circus to work it is an advantage if more than half of the members already know and like each other, and are agreed on their approach to the subject.

EXERCISE D

Can you suggest ways of identifying, employing and organising writers in your own country for each of the following courses? List those available whom you would choose and why:

(a) a course for an examination, in any subject you choose, at your own institution;

(b) a nonformal course at your own institution;

(c) a course to teach the most widely used second language for a secondary-level examination, in a new institution in the third world;

(d) a university-level course in agricultural economics, to be administered by a university which does little distance teaching;

(e) a course for health educators. You are working in an established institution which has been directed by your chief administrator to implement the course in five months' time.

**COMMENT**

One common method of identifying writers is to advertise. However, we may wish to try informal routes - approaching teachers, subject specialists, extension officers, curriculum centres, education inspectors, university departments or any other suitable agencies - to see if they can suggest suitable people.

In making decisions of this kind, four factors predominate: time, cost, availability and sensitivity. Your choice is probably determined by the length of time needed to produce the course; the likely costs of different approaches; who is available and on what terms; and the sensitivity of writers, advisers, and critics, both within and outside the organisation.

## What are editors for?

The longest part of the production process is that of turning the idea or decision to produce a course or set of materials into something that can be printed. There is usually a single person in charge of this stage who supervises and controls the progress and co-ordinates the other staff members who are involved. In many institutions this will be the editor (or where there are many editors, the senior editor).

There are two difficulties in defining the role, or working out the job description, of an editor. The first concerns the relations between an editor and the academic staff of an institution. Each is likely to be jealous of the other's rights. Second, the editor has a job which is partly educational and partly administrative. Much of his work is concerned with the teaching effectiveness of the materials he is editing. He will therefore need to have, or to develop, skills in pedagogy, in the presentation of information, in helping people to learn. At the same time, if the editor is co-ordinating and managing the production of a course, he spends a lot of his time ensuring that course units are set and printed at the right time and in the right way, and simply administering production.

Where an institution has academic (subject) staff as well as administrative and editing staff, the relationships are more complicated. It requires a carefully constructed system of liaison between the academic and editing staff. As far as possible the lines of responsibility for the finished product must be clearly drawn: who, in the last resort, decides what goes into the final version, the subject specialist or the editor? In most cases a consensus between the two can eventually be found, but where no compromise can be reached, someone must decide. We would usually give final authority to the editor. The course team approach, under the leadership of a chairman, who may or may not be the editor, is one way of solving - or avoiding - this problem.

We can now move towards a job description for an editor. His job will include some, or all, of the following:

finding, briefing and training writers and recommending their reappointment or dismissal;

working with writers on improving the quality of lessons, ensuring that each lesson teaches well, that the language is clear, and that the instructions to students are clear;

preparing lessons for print, checking that they are clearly linked with any other components of the course, and organising the text, paying attention to detail, so that it is ready for printing;

supervising the printing of courses;

controlling the progress of course development;

resolving conflicts between those involved in course development.

In some institutions one person will do all these jobs; in others some members of the editorial staff work with writers while others prepare materials for printing. In either case, we can define the function of an editor as to represent the future students while the course is being written. An editor can stand back from a course more easily than a writer, and imagine the reactions of a student to the lessons.

We have already considered how far writers should be employed full-time or part-time. Similar issues arise over the employment of editors. There are also disputes about the extent to which an editor should be a specialist in the subject for which he is editing courses. We deal with these issues in turn.

Since part-time editors generally work on a limited number of courses at any one time, they are sometimes able to work quickly and efficiently through lessons as they are ready. On the other hand they are often insufficiently involved in the institution or its needs, and may be unable to attend meetings or meet writers when this is required. Full-time editors usually work on several courses at a time, and their workload may be uneven. They may not be able to respond to writers immediately, and thus the writers' momentum may slacken. But generally they are able to rearrange their work to meet immediate demands. Because editors have a key position supporting writers and keeping to a production schedule, full-time editors are almost always preferable to part-time.

EXERCISE E

Imagine you are writing a correspondence course, a set of booklets or a manual on your own specialist subject. Would you prefer to work (a) with an editor who is a specialist in the same subject, or an editor who deals with any subject; and (b) with a full-time or a part-time editor?

Why?

COMMENT

In many circumstances, there are arguments for the generalist editor, who can more easily look at things from the students' viewpoint. It is difficult to write clearly for distant students. A non-specialist editor has something like the same starting point as the students - little knowledge of the subject. If he cannot understand what the author writes, then it is unlikely the students will. Second, the author knows her subject matter. What she needs most is advice on how to present the material well at a distance. The editor's experience can help here.

At an advanced level, such as a degree-level course in one of the sciences, a specialist editor may be needed. A large institution may, of course, be able to appoint several different subject editors. There is, however, always a danger that subject specialists, editors and writers may disagree. Sometimes the naive editor who simply says 'I don't understand' is more effective than the specialist editor who supports a different school of thought from the writer. On the other hand, the specialist editor is going to be in a stronger position to challenge an author who defends a position the editor finds educationally unsound.

The editor is concerned with the appearance as well as the content of courses and so is concerned with illustrations as well as text. Pictures and other illustrations are a vital and integral part of most printed teaching materials. They should not be features added on to a text to make it look nice. It is important therefore that the editor and the writer discuss and plan illustrations from the beginning. If possible the illustrator or graphic artist should be involved in such discussions at a very early stage: sometimes the artist will be able to suggest to the writer ways in which illustrations can help to simplify or clarify a particular teaching point. For this reason most distance-teaching institutions need to employ a full-time graphic artist. Such a policy is even more important in nonformal education projects than in formal education. There the role of pictures is often central to the institution's ability to reach and support an illiterate audience. The difficulty, especially at an early stage in an institution's life, is that there may not be enough work to keep an artist busy full-time. In such cases one answer is to share the services of an artist with another institution with similar requirements.

EXERCISE F

(a) Imagine you are an editor working in an institution which is divided into two departments, one educational and one administrative. In which department would you prefer to work? How would you overcome the disadvantages of making the decision that you have taken?

(b) You have enough finance to employ one full-time editor, or two part-time editors, for a college which is running courses in both formal and nonformal education. The available candidates, all of whom may be interested in full-time or part-time work, are:

> someone with marked skill in writing clear English but no experience of editing, and a distaste for dealing with the layout of text and production;
>
> an experienced textbook editor, who regards editing essentially as a desk job;
>
> a community development officer, who has already written a handbook on village technology, and is interested in writing more materials;
>
> a teacher, who is a competent artist and writes well, but is looking for a job as a result of a long history of conflict with her head and deputy head teacher.

Which would you employ? Would you employ him/her full-time or part-time? Why?

COMMENT

The criteria you will have used in doing Exercise F depend on the decisions you have made about the administrative and educational roles of the editor, about the editor's specialist skills and on the advantages of full-time and part-time working. Check your answers by reading again our preferences expressed on pages 38 to 40. Much of the editor's work is concerned with persuading people to change something they have written. Few people like doing this and they rarely immediately see why they should. Persistence, patience and persuasiveness are therefore vitally important qualities for an editor.

## Where should things be printed?

The last stage - once a course has been defined, written and edited - is to produce the text. As we have seen, the editor may be in charge of this stage, or there may be a production manager who sees it through from editing to the delivery of completed texts to the despatch section. Or there may be both, often with the production manager responsible to the editor. In planning the production of printed materials we have to consider three sets of questions:

Who supervises production and controls progress?

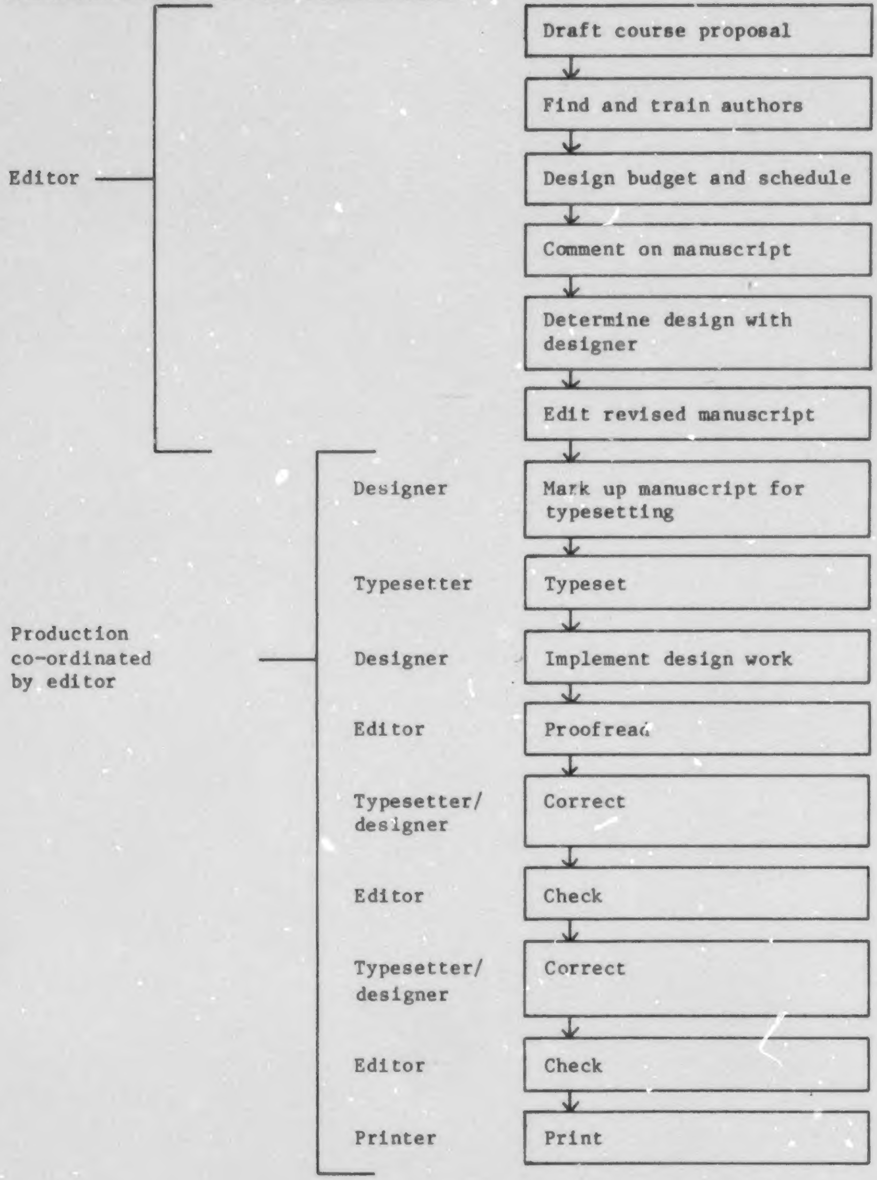
How much is done within the institution and how much outside?

What printing method is used?

We consider the first two sets of questions together.

Whoever supervises production needs to be in touch both with writers and with printers. She is thus concerned both with educational and with production or administrative staff. In order to plan production, and keep track of its progress, she needs to have clearly in her mind and on paper a statement of all the production stages, of who is responsible for each of them, and of the length of time each stage is likely to take. The diagram on the next page shows what this looks like for one institution.

Production stages and responsibilities


Editor
Draft course proposal
Find and train authors
Design budget and schedule
Comment on manuscript
Determine design with designer
Edit revised manuscript
Production co-ordinated by editor
Designer
Mark up manuscript for typesetting
Typesetter
Typeset
Designer
Implement design work
Editor
Proofread
Typesetter/designer
Correct
Editor
Check
Typesetter/designer
Correct
Editor
Check
Printer
Print

In making plans, it is necessary to be realistic about the time each stage will take, and not to assume things can be hurried. There is always a serious temptation to underestimate the time each stage of production takes.

The job of the editor, or administrator, in charge of production is affected by the decision to print inside the institution or outside.

A distance-teaching institution may have its own printing equipment or use outside printers. As usual there are arguments on both sides. If you have your own equipment, you have tighter control and in an emergency can get printing done in a hurry. There are also potential long-term economies if you make full use of your printing equipment. If printing is done outside, you avoid capital costs, which may be heavy. You may be able to choose different kinds of printing techniques for different kinds of jobs, and if the flow of work is uneven and sometimes light, your own printers will not be left idle. Generally a large institution would probably do best to have some basic facilities, and be prepared to contract out some of the work. The printing industry in many countries is so organised that you can get part of your production done by one firm and part by another. You may, for example, print materials on your own presses, but have them bound somewhere else. Or you may print most things yourself, but where you want special kinds of illustration which need particularly high-quality plate-making, or reduction from the original size or specially large posters, you may decide to use another more sophisticated printer.

There are administrative consequences of your decision to print inside or outside your own institution. If you have an internal print shop, you need someone in charge of it: the control of printing may become so great an administrative burden that it takes up too much senior staff time. We know of two distance-teaching institutions in which one of the most senior staff members, whose job ought to have been to do something else, spent half his time overseeing the print department and overcoming its problems. So there is a price to be paid for the greater control you have by printing in house.

EXERCISE G

Consider your own distance-teaching institution, or another with which you are familiar.

Where is printing normally done?

What problems arise as a result of this?

How would you overcome these?

What kind of printing is not normal, and where is that done?

What are the administrative factors which may lead you to make the decision to print something inside or outside your own printshop?

COMMENT

Four factors have probably determined your answers:

the complication of controlling your own internal printing compared with the difficulty of getting what you want from outside printers.

the degree of control and freedom you want;

the comparative cost of internal and external printing;

how easy it is to find the capital to buy machinery and the staff with the skills needed to operate it.

## How should materials be printed?

Next, we need to consider the kind of printing we should use. We can start very simply, provided we have a good typist with a reasonable typewriter. A good typist can prepare reasonable texts with any typewriter which is in good condition. However, a typewriter with a golfball head or a typesetting machine allows a variety of typefaces. (Letterpress printing does not require such typing - see below.) However well the text is typed, results depend on the printing equipment used. Let us look at the more common methods of reproduction.

Letterpress printing : This is the traditional method. Raised, reversed metal letters are placed in trays, and ink passed over the surface. Paper is then pressed onto the inked letters. Letterpress is of declining importance except for alphabets for which typewriters are rare or unsatisfactory.

Offset lithography : Text is typed, and text and pictures glued onto pages called 'artwork'. The image is transferred photographically to plates, using a process based on the fact that oil and water do not mix - the background of the plate is oily so the ink does not adhere to it. Lithography is versatile, as you can start with almost any written, or typed, or drawn original on plain paper.

Stencil duplicating : The text is placed on a stencil, so that the stencil is cut with holes where inking is required. Ink is pushed through the holes to print. The stencil can be prepared on a typewriter, which simply cuts the letter shapes, or artwork can be prepared and stencil made by a mechanical copier. Two common kinds are mentioned in the accompanying table. Stencilling is less

**Features of different printing methods**

| | Good for long runs? (i.e. many copies) | Good for short runs? | High quality reproduction of words? | Versatility in typographical possibilities? | Good for line drawings? | Good for photographs? | Big capital outlay? | Skilled technicians needed? | Labour-intensive? |
|---|---|---|---|---|---|---|---|---|---|
| Letterpress | yes | no (too expensive) | yes | yes | OK (good but costly) | OK (good but costly) | yes | yes | yes |
| Offset litho | | | | | | | | | |
| metal plates | yes | OK (expensive) | yes | yes | yes | yes | yes | yes | OK |
| paper plates | no | yes | OK | yes | yes | OK | yes | yes | OK |
| Stencil duplicating | no | yes | OK | no | OK | no | no | no | no |
| traditional stencils | no | yes | OK | no | OK | no | no | no | no |
| thermocopied stencils | OK | yes | OK | yes | yes | no | no | no | no |
| electronic scanner stencils | yes | yes | yes | yes | yes | OK | OK (but recurrent cost of plates can be high) | no | no |

versatile than lithography, but the machines are cheap, robust and relatively easy to operate and repair. The paper used, however, is often more expensive than that used in the first two processes. Stencils are only good for short print runs.

EXERCISE H

Examine the table on the previous page. If you already work in a distance-teaching institution, consider the use that is made of your printing equipment. What new equipment or changes in course design might you consider introducing?

If you are planning an institution, what kind of printing equipment do you think will best suit your needs? (Consider the sorts of questions you might want to address to salesmen.)

### COMMENT

Your answer to this exercise will probably depend on the scale at which you are working, and the state of the printing industry locally. The state of the local industry will determine how easily you can recruit staff with particular skills. In Britain, for example, a new institution would be very unlikely to set up its own letterpress operation, as it is easier to recruit staff who can prepare copy for offset litho and to operate litho machines. If you are a long way from anywhere where printing equipment can be serviced, you may want to choose stencilling because of its simplicity, although it is much less versatile and ultimately more expensive than lithography. And if you are printing in alphabets where it is easier to get founts of type than to type on a typewriter, you may go for letterpress. An important consideration is the kind of equipment which other institutions are using. The more common the equipment the more likely you are to find satisfactory servicing, supplies and replacement facilities. This is also an argument for standardising the equipment you buy.

### What have we learned?

This unit has described the functions of a production department, and suggested that it can be organised in several different ways. It has asked you to assess the needs of your own institution, and evaluate the system you now use, or consider the issues in staffing a new department. There are no straightforward answers to questions about staffing and organisation. We have tried to suggest, however, that you aim at a core of permanent staff who work efficiently as a team. Distance teaching can be cheaper than, though as good as, conventional teaching. One of the reasons for its low cost is its use of resources that are available in the community. We have suggested how you may be able to use experienced practising teachers, part-time editors, or outside printers. We have pointed out, however, that there are always advantages and disadvantages of using outsiders part-time. We stress that you should always weigh these up when deciding whether to use outsiders or employ full-time staff.

The art of administration is to achieve the least unsatisfactory solution when all your colleagues are awkward and unco-operative and everything that can be expected to go wrong does so. We conclude by asking you to exercise these skills in a game.

### Course Production Game

Many of the decisions and organisation patterns we have discussed in Units 2 and 3 will be determined by the particular problems and circumstances of your own institution. To give you a wider experience of the sorts of problems and decisions with which you will be faced we have devised a course production game, which you will find in its own folder. You should play this game with others who are affected by and have influence over the problems and challenges of course production. The instructions on how to play are given with the game.

ASSIGNMENT 3

You should now be in a position to comment constructively on the print production department or departments of your institution. If you already work in a distance-teaching institution, suggest and explain changes you would like to see. If you are planning an institution, describe the department you would like to have, explaining how your plans fit with local conditions. (You can refer to your answers to previous exercises and to our comments after each exercise where these are relevant.) Remember to examine each of the four processes we started with when preparing your answers:

planning the curriculum,

writing the texts,

editing the materials,

printing the materials.

# Unit 4: Managing radio broadcasts and audio recordings

In this unit we shall look at the management of radio broadcasts for distance teaching in the same way as we considered the management of print in the previous unit. With radio broadcasts we include audio taped materials which are distributed to students, whether or not they are being broadcast over the air. We do not consider in this manual the management of television broadcasts. This is partly because television is so much more expensive and more complex to use. It is much less common than radio, therefore, in distance-teaching institutions in the third world. It also introduces many special administrative considerations which we do not feel able to deal with here.

Many of the considerations which we examined in Unit 3 apply in part to broadcasts and where appropriate we will refer you back to the relevant passage. But there are also questions which apply specifically to radio broadcasts and these we shall treat in more detail. This unit should help you to find the answers to the following questions:

What are the stages of broadcast production?

Who decides on the content of the programmes?

How and where should programmes be produced?

What sort of staff should we employ to write and produce the programmes?

How should the programmes be distributed to students?

When you have finished this unit you should:

1. understand the different ways of organising radio materials for distance teaching;

2. be able to list the advantages and disadvantages of these various arrangements for your own institution;

3. recognise and be able to make provision for the different administrative requirements (if any) of radio and tape recordings;

4. be able to propose an organisation which is appropriate for your own institution.

## What are the stages of broadcast production?

Radio involves the following stages of production:

1. the ideas and content for the programme or programme series are agreed by those concerned;

2. script writers and producers are chosen and (if necessary) commissioned;

3. scripts are written;

4. items such as interviews, discussions, drama or actuality (outside recording of real-life activity) are prepared and recorded; music and sound effects are selected;

5. the programmes are recorded in studio;

6. the material is edited and the final programme assembled.

Finally, if the programmes are to be distributed as audio tape recordings then

7. they have to be copied as many times as is needed for distribution.

## Who decides on the content?

The discussion in Unit 3 about decisions on the content of the course as a whole is relevant here. You should now refresh your memory by re-reading Unit 3, pages 31-32.

But there is another stage to the discussion. Who decides what part of that content is to be covered by radio? A subject or curriculum specialist, whose expert opinion might determine the answers on overall content, is not necessarily qualified to decide on the best use of radio. The functions of each of the media used - print, radio, face-to-face - need to be agreed through discussion by the people in charge of each of them. This brings us again to the course team approach which was discussed in Unit 3, pages 36-37. One function of a course team is to decide how the different media should be used, how each can make its maximum contribution and how those contributions should fit together. Even where there is no formal course team it is very important that the editor, the writer(s) and the radio producer should meet from time to time to ensure that their respective contributions are integrated and that they reinforce rather than simply repeat or, worse, contradict each other.

Most radio stations insist that they have final editorial responsibility for any programmes which they broadcast. They therefore claim final control of what is included. Such control usually concerns only the technical quality and the political or social acceptability of the content. Educators would rarely object to such control, and it is in practice likely to be exercised only very occasionally. More important is the task of ensuring that the programmes are academically, pedagogically and professionally as effective as resources allow. This requires very close co-operation between the subject specialists and the broadcasters. Producers who are neither committed to the educational purposes of the distance-teaching institution nor trained in the techniques of educational broadcasting will often leave the choice of content and presentation methods entirely to a subject specialist. If the latter has no training in broadcasting, the results are likely to be dull programmes. If the students listen to them at all (and most will switch off), they will not gain much help in their learning. The management structure should be designed to ensure that broadcasting skills and subject mastery are combined. For that reason we advocate the employment by the distance-teaching institution of a broadcast specialist who is at the same time an experienced educator. That person's responsibility is to bring together the skills of broadcasters and subject specialists in order to make effective programmes. Sometimes he will have to produce the programmes himself; sometimes his job will be mainly to liaise between the institution's writers and the broadcasting body's producers. Such a specialist needs to be a senior member of the organisation and to have recognised academic status; probably he should have similar status to the editor, and therefore be senior to writers and producers.

EXERCISE A

(a) If your institution uses radio, who decides on the content of the radio programmes?

the course writer

the producer

the two together

someone else (specify)

(b) What (if any) problems arise from this?

(c) How would you propose they could be solved?

N.B. If your institution does not use radio, read the case studies indicated on the next page and then answer the questions in relation to one of those.

COMMENT

It must be clear to you by now that we are strongly in favour of joint planning of the content of broadcasts by the subject specialists and broadcast specialists. If the subject specialist decides alone, she might urge that the programme simply repeats what is in print; if the producer decides alone he might get the emphasis or interpretation of the subject-matter wrong. But we recognise that in some cases such joint decision-taking is impossible, whether because the course-writers have no access to or influence over the producers, or because the producers are not qualified to be involved in academic decisions, or for other reasons. In such cases it seems to us advisable that the course writers receive some training in broadcast production.

Another possible solution if no radio specialist is available is to give the materials editor some training in educational radio and to put him in charge of the co-ordination of radio and printed materials. This solution is only feasible if the quantity of radio or audio taped materials is quite small.

### How and where should programmes be produced?

The production of radio programmes is a technically sophisticated process and requires expensive equipment and purpose-built studios. It also requires specialist skills. In most countries such studios, equipment and skills can be found in existing broadcasting organisations. A vital question for a distance-teaching institution which decides to use broadcasts is whether to produce its own programmes and to equip itself with the facilities and personnel to do so, or to negotiate with the existing broadcasting agencies to produce its programmes for it. The institution must weigh the expense of having its own facilities and staff against the control over the speed, the schedule and the quality of production which that gives it. For sometimes the existing broadcasting organisations do not have enough equipment, time or staff to pay adequate attention to the special requirements of distance education programmes. What staff they have, moreover, are often inadequately trained in educational broadcasting. The expense of separate studios, however, is only justified if the institution is doing enough broadcasting to keep those studios and their staff fully occupied.

## CASE STUDIES

You should now read Case Studies 3 to 6. They describe how four different institutions have worked out ways of linking broadcasts to printed courses and of arranging for the broadcasts to be made. One of them (MCA, Mauritius) refers to projects which included television programmes; this did not seriously affect its pattern of co-operation with the broadcasting organisation. As you read the case studies notice the following:

Who owned the studios and equipment?
Who employed the various categories of staff?
What influenced these decisions?
What problems arose in each kind of co-operation?
What changes took place as the projects developed?

## COMMENT

The first and most obvious difference between these four are the different levels of ownership of recording, production and transmission facilities.

1. In Colombia the radiophonic school owns and runs its own radio stations. It has its own staff, studios, recording and copying equipment and even its own transmitters. It is therefore in complete control of its broadcasting operation. It pays for this freedom by operating its stations for much of the time as commercial radio stations, and using some of the revenue to meet the costs of its educational programmes.

2. In Lesotho, the Lesotho Distance Teaching Centre has a small, fully equipped radio studio, in which it records and produces all its own radio programmes. These programmes are then sent, on tape, to Radio Lesotho, which broadcasts them at agreed times in its radio programme schedule.

3. The Mauritius College of the Air, on the other hand, originally had no studios of its own for either its radio or television programmes. For both it had to come to an arrangement with the Mauritius Broadcasting Corporation (MBC), for production as well as transmission. It did, however, have sound tape recorders, video tape recorders, editing facilities and cameras of its own, which enabled it to do a lot of the preparation work before going to MBC to record the complete programmes. In recent years MCA has built up its own recording facilities, but it is still wholly dependent on the MBC for transmission.

4. Nigeria has an educational broadcasting service of long standing.

From the outset of its correspondence agreement with the University of Lagos, the Nigerian Broadcasting Corporation took full responsibility for production and transmission of radio programmes to support the Correspondence and Open Studies (COSU) courses. COSU, however, was responsible for defining the subject areas in which programmes would be produced and locating script writers who would be familiar with the courses' content. COSU therefore had a senior member of staff designated as Senior Lecturer, Broadcasting Services.

An important point emerges from the Lesotho and Mauritius experience. Though the final production of a radio tape requires a studio, a lot of work collecting material for it and preparing scripts can be done outside the studio with quite simple equipment. It is therefore possible to prepare programmes in advance and record several at a time in borrowed facilities. In this way the dependence on elaborate equipment and studios can be kept to a minimum. This is particularly true if the tapes are for distribution by cassette rather than by radio, so that there is less need for a strict timetable.

It is vital, however, whatever kind of relations are established with the broadcasting organisation, that the agreement is clearly spelt out, and the different responsibilities and commitments formally sorted out. The danger of personal and informal agreements is that either side may underestimate its own commitment and assume that greater resources than are in fact available are being contributed by the other party. Many inadequate programmes have resulted from unclear agreements being made between non-broadcasting agencies which underestimated the technical skills required for radio, and broadcasting agencies which did not have additional production resources to put at their disposal. The formal agreement must include details of available airtime, production personnel, field recording equipment, facilities and personnel, studio time, final editorial responsibility and costs and payments expected by both sides.

EXERCISE B

Take as an example your own institution or any institution with which you are familiar which provides broadcasts. List the facilities it uses for the production of such broadcasts. To whom do they belong?

| Facilities/equipment used | Who owns them? |
|---|---|
| | |

Which of the above facilities/equipment do you consider it absolutely essential for that institution to own (whether or not it has such facilities at present)?

COMMENT

You will probably have seen that the ownership of the facilities and equipment used by the institution you chose to look at varies: some are owned by the institution itself, others by an outside agency. At the very least (unless you have chosen a broadcasting station) your institution will rely for transmission on another agency. The ability to use the equipment and facilities owned by others depends on careful planning and management, and on the maintenance of close liaison and good relations with those other institutions.

If you are making radio programmes you will need at the absolute minimum a high quality tape recorder for recording broadcast quality inserts (interviews, etc.). Usually these are good portable reel-to-reel recorders, but it is possible to use a good cassette recorder so long as the studio facilities include the ability to transfer from cassette to open reel without loss of quality. It is important for reasons of both quality and economics to seek professional advice on suitable tape recorders for your own circumstances.

### What sort of staff should we employ to write and produce programmes?

The following categories of staff are needed to make radio programmes:

producers
script writers
recording staff
announcers/actors
studio technicians
maintenance technicians

### EXERCISE C

(a) List all the staff involved in broadcasting work of your own institution, an institution you are familiar with, or an institution you are planning. Against each, tick whether they are full-time or part-time, employed by the institution itself or by another body.

| Job | Number | Full-time | Part-time | Employed by | |
|---|---|---|---|---|---|
| | | | | distance-teaching institution | other body |
| Producers | | | | | |
| Script writers | | | | | |
| Recording staff | | | | | |
| Announcers | | | | | |
| Studio technicians | | | | | |
| Maintenance technicians | | | | | |

(b) What are the problems created (or likely to be created) by this staffing pattern, and how would you hope to overcome them? (Use a separate sheet of paper if needed.)

COMMENT

It is seldom justified to employ all these staff on a full-time basis within a distance-teaching institution. The decision who to employ full-time and who part-time for such jobs depends largely on the facilities available to the institution. If the institution owns the facilities it will have to employ larger numbers and more varied categories of full-time staff than if it relies on studios and equipment belonging to another body. Only where the institution maintains its own studio or a large amount of equipment of its own does it require its own full-time technicians both to operate and to maintain that equipment. Again the volume of broadcasts to be produced will influence how many full-time staff it can afford to employ. And finally the availability of part-time staff with the requisite skills will affect the decision. A more detailed discussion of the advantages and disadvantages of full-time and part-time course-writers can be found in Unit 3, pages 33-36. You should re-read that section now and think which of the considerations discussed there apply to radio writers, producers, actors and technicians.

The most important person in the development of good radio programmes is the producer. The producer's job includes the following:

1. to design a programme whch uses the medium of radio to communicate the agreed content to the audience as effectively as possible;
2. to research the content of suitable programme material;
3. to decide on the programme format and the number and nature of its items;
4. to locate and commission script writers for each item;
5. to locate and commission or record interviews, inserts, etc., which need to be recorded outside the studio;
6. to locate and commission suitable announcers, actors or participants to take part in the programme;
7. to select and/or edit all scripts and inserts;
8. to locate and select sound effects, and music for the programme;
9. to supervise the final studio recording of the whole programme, including inserts;

10. to edit or supervise the editing of the final tape;

11. to ensure that the programme is an integral part of the whole teaching package.

If your institution is to do any broadcasting at all, it will need to have at least one person who has been trained and is experienced as a radio producer. The more programmes there are, the more producers will be needed on a full-time basis; if the institution is producing its own broadcasts these producers should be its own employees; if another broadcasting agency is producing the programmes for it, the producers will need to be attached by that agency to the distance-teaching programme, and the organisation's own producer will be primarily a liaison officer.

Script writers can often be employed part-time, and can be recruited either from the institution's staff in other sections - e.g. subject specialists and course writers - or from other agencies with specialists in the particular subject required. Writing for radio, however, is a very different skill from writing for print. It is most unlikely that teachers or subject specialists, even if they are experienced text or course writers, will be able to write effective radio scripts without special training. There are several handbooks available on writing for radio. Their use in short training workshops adds to their impact. Close supervision and careful editing of scripts, especially those written by part-time script writers, is essential.

Radio is an oral medium. The voices and the quality of their oral delivery are important features in an attractive radio programme. It is often necessary to employ experienced radio announcers and actors to read scripts or to perform dramatised inserts, rather than asking the script writers or the subject specialists to read them. Such announcers or script writers can usually be found associated with the radio station.

Two kinds of technical skill are required. The first is that of the studio technician who can operate the studio equipment, during recordings and productions, to the best effect. The second kind relates to the repair and maintenance of both recording and receiving equipment. Again the local radio station is the most likely place to find such skills. It is only necessary for either kind of technician to be employed by a distance-teaching institution if it has its own studio or if it supplies its students with receivers.

## How should the programmes be distributed to students?

So far we have not distinguished between materials prepared for open, or broadcast, transmission and materials which will be distributed on tapes. Most of the arrangements for preparing and recording them are likely to be the same, though where the materials are not to be broadcast at all it might be more difficult to obtain the co-operation of the broadcasting agency. It might then be more important for the distance-teaching institution to have its own recording equipment and facilities. On the other hand, if it is only providing cassette recordings, these are likely to be limited in quantity and, as has already been pointed out, the timing of production can usually be flexible. Most large towns have commercial or educational studios where such recordings can be made and paid for.

The choice between tapes or open broadcasts, however, has an important impact on the arrangements an institution has to make for their delivery to and reception by its students. We have looked at the advantages and disadvantages of both systems in Unit 2, pages 23-24. Such considerations should affect the decisions about which to use. Once these decisions have been made, however, it is an institution's responsibility to ensure that its students have access to its materials.

EXERCISE D

(a) What steps does your institution take to ensure its students can listen to its programmes?

(b) Are such steps taken for individual students or for groups?

(c) Does it provide equipment (radios, cassette players or recorders)?

(d) Who pays for such provision?

(e) What problems does it encounter?

(f) What steps do you suggest should be taken to improve its system?

COMMENT

If material is being broadcast, it is probable that students will be expected to have their own receivers and to be able to listen in their own homes. In most parts of the world this is true for radio, though in some countries, and for nonformal education, it is necessary to arrange for group listening in rural areas (see Unit 5, page 76, for more details). It is also important to make sure that the programmes are broadcast at times and on wavelengths which are convenient to the student body.

If the decision is to distribute tapes, whether or not they are tape recordings of broadcast programmes, the institution has two organisational responsibilities. First it must ensure that its students have access to the necessary players or recorders. In many countries and for many categories of students cassette players or tape recorders are much less widespread than radios, and they must therefore be specially provided, an additional expense unless they are made available only at study centres. Secondly the tapes themselves have to be copied, stored and distributed. In most cases this is no more difficult than the distribution of course texts and textbooks, except that additional security and protection must be provided.

## What have we learned?

In this unit we have looked at the different activities necessary to make radio programmes as part of distance-teaching courses, and at the administrative implications of those activities.

1. We have seen that decisions about what goes in to such programmes must be taken jointly by subject specialists and radio producers.

2. We have examined different co-operative arrangements for producing radio programmes, from the institution having its own production facilities and staff to a total dependence on the broadcasting agency to produce them for it.

3. We have listed and looked at the jobs of the different kinds of staff needed for radio work and at where they can be found.

4. And we have discussed the responsibilities of a distance-teaching institution for ensuring that its students can receive its radio (or tape recorded) programmes.

## ASSIGNMENT 4

A. If you work in a distance-teaching institution which makes use of broadcasts:

1. Describe the administrative arrangements through which the programmes are made and distributed; take each stage of production (pages 50-51) and distribution (pages 57-58) and state:

   Who is in charge?

   What staff are involved?

   Who employs the staff?

   What equipment is used?

   Who owns the equipment?

   Where is it carried out?

2. List the problems arising at each stage and suggest and explain changes in these administrative arrangements which you think would improve them.

B. If your institution does not use broadcasts, or if you are involved in planning a new institution, describe what arrangements you would propose for including broadcasts in your teaching system. Take each stage of production and distribution, as above, and answer the questions listed in (1) above in relation to it.

Refer back to your answers to the earlier exercises and to our comments after each exercise in this unit as you prepare your answers.

# Unit 5: Organising student services

This unit will examine ways of organising student services in addition to providing basic teaching materials for learning at a distance. It will seek to answer such questions as:

What help in addition to the teaching materials do our students need with their courses?

What kind of tutoring and counselling do they need?

What help can be provided at a distance?

What face-to-face services can we provide?

How should these services be organised and co-ordinated?

By examining these issues you will be able to see administration and organisation from the students' point of view. This will ensure that the services you provide are designed to meet the students' needs as closely as possible. Remember institutions exist to serve their students, not themselves. By the end of this unit you should be able to:

1. analyse your students' needs and list the services you can provide to meet them;

2. recognise the various kinds of tutoring and counselling which are appropriate for different groups of students and distinguish between those which can be provided at a distance and those which require face-to-face contact;

3. set up and administer a postal tutorial and counselling system, study centres, contact sessions, practical activities and demonstrations, study groups, residential courses, and contact with extension workers, craftsmen or local specialists;

4. design, create and maintain an effective central - and, if needed, regional - administration to run these services.

## What help do our students need with their courses?

There is always a danger that institutions may become bureaucratic and self-centred, paying more attention to administrative considerations and prestige than to the students. It is always important to remember that an educational institution is only justified if it provides effective education for its students. Institutions should constantly strive to improve their services. They should always ask themselves: Are our students benefitting from the programme? In this way they become more student-centred rather than self-centred. The fact that the student body of a distance-teaching institution is scattered makes the dangers of bureaucracy greater and the challenge to remain student-centred more important.

If distance students are to study effectively, three sets of requirements must be met:

1. **Regular and reliable delivery of teaching materials** : These may be written correspondence courses, radio programmes, posters and leaflets, or television programmes. They are usually the starting point for the students' study. We looked at the efficient management of their production in Unit 3, and shall deal with delivery in more detail in Unit 6.

2. **Contact with tutors and fellow students** : Very few of us can study effectively entirely on our own. We need the chance to discuss what we do not understand - and often what we think we do understand - with people who know more about the subject. Such help, whether it is face-to-face contact or at a distance, is the basis of tutoring and counselling services. They relate not only to academic problems, but also to personal study difficulties; they consist not only of advice and suggestions but also of encouragement and reassurance; they should begin before the student enrols, continue throughout the course, and include assistance in finding ways to follow up and apply what has been learned. It is the job of the administration to provide such services in whatever ways it can.

3. **Support services and study facilities** : Most courses need more than just the course materials. Some include or lead to practical work; many demand additional reading; sometimes group discussion and joint activities are essential ingredients. It is the responsibility of the institution to ensure that whatever support or facilities are needed in the course are available to the students. This does not always mean that the institution provides such services itself; it might often be able to arrange for them to be made available to distance students through bodies which exist primarily for other students.

We shall look at the last two points in detail in this Unit, but first do Exercise A on the next page.

## EXERCISE A

Imagine that an institution you work for is offering the following three courses to people learning at a distance. List the materials you will need to provide, and the kind of contact and other supporting services you should arrange. Try to think of as many examples as possible under each heading.

(a) 'The Health of your Child', a radio series for young mothers, most of whom are illiterate.

| Study materials | Contact with whom and how | Support services/ activities |
|---|---|---|
| | | |

(b) A correspondence course on woodwork to prepare 18-year-old ex-secondary students for examinations.

| Study materials | Contact with whom and how | Support services/ activities |
|---|---|---|
| | | |

(c) School teachers taking a university degree-level course in science teaching.

| Study materials | Contact with whom and how | Support services/ activities |
|---|---|---|
| | | |

COMMENT

(a) 1. In the first course most of the audience are illiterate. It is likely that you will have to reinforce the radio series with printed materials of two kinds: some for the young mothers - in the form of posters and picture handouts; and others for primary health workers who may act as monitors or discussion group leaders - in which case they will need instructions on how to do so and details of the information in the programmes. You may also have to provide radios for the rural clinics where the health workers meet the young mothers, so that discussion groups can be formed there; or you may decide that the mothers can listen at home on their own radios before coming to the clinics, or other suitable meeting places to discuss them. The decision about where the audience will listen to the programme - at home or in a group - will affect the timing of the broadcast.

2. We suggested above that you would probably need to ensure that there is organised contact between the audience and primary health workers in order to reinforce the radio programmes.

3. If this contact is to be in the form of study groups, your own institution will have to ensure that the necessary arrangements are made - that accommodation is available and that the health workers are given some training in group leadership.

(b) 1. The correspondence lessons on woodwork are the only study materials referred to in the second course. A decision would have to be made about whether these would be distributed by post or by other means. Postal tutorial work would presumably be an integral part of the course.

2. Practical work would be an essential ingredient in a woodwork course. Such practical work would have to be

supervised. If possible, woodwork teachers would be the ideal supervisors; otherwise skilled carpenters or joiners could be recruited, or, if neither were available, ordinary teachers or tutors whose job would be to ensure that instructions were followed, equipment secure, and adequate safety precautions taken.

3. Practical work requires equipment and facilities. If your institution is offering a woodwork course it must ensure that your students have access to them. This might be done by arranging for them to use local workshops on an organised but occasional basis, or it might be necessary to develop kits for loan to students.

(c) 1. At university level a correspondence course would also include student work assignments and a postal tutorial service. It would almost certainly also need to be supported by prescribed textbooks. In most developing countries access to such texts, through bookshops or libraries, is extremely limited. Your institution will therefore need to make special arrangements to supply textbooks along with the courses.

2. It is also very important for most university courses to provide some face-to-face tutorial meetings. These may be regular meetings arranged locally, or occasional residential courses at the university of some other central or regional institution.

3. Advanced science also requires advanced scientific practical work. Access to laboratories where such work can be carried out must be arranged for all students. Again some of this might be carried out in local, non-university facilities. For other experiments it may be necessary to arrange for occasional access to university laboratories.

## What kind of tutoring and counselling do they need?

On page 62 we listed 'contact with tutors and fellow students' as the second category of student needs. Broadly speaking students need four kinds of advice at three different stages of their studies.

Before they start they need help in choosing what to study and how to study it.

Once enrolled in a course they need:
1. help and advice on the subject-matter of the course they are following;
2. advice on personal problems which make it difficult for them to pursue their studies.

These two constitute the core of tutoring and counselling respectively.

Finally, at the end of the course they need advice on how to use and follow up the course after they have finished.

Let us now consider each of these in more detail.

## Pre-course advice

Most adult students choose to study of their own accord. Often they do not know what is available or what courses will be most appropriate for them. They simply contact any distance-teaching institution they have heard of, by calling in person, telephoning or writing a letter. Any such institution with a genuine concern for its students must make advice available for casual or ill-informed enquirers on the choice of courses, and on enrolment procedures. Detailed information bulletins are one way of doing this. But there must also be someone who has special responsibility for giving personal advice, on the telephone, or by letter, or even by arranging individual interviews for prospective students. If none of the institution's own courses are suitable this student adviser must be prepared to say so and to give detailed information about alternative possibilities. Such a person must therefore have a wide knowledge of adult education opportunities. However busy the institution is when enrolments are taking place, it is essential that such advice is given and that no enquirers are sent away - or wrongly enrolled - because it is lacking.

The amount of advice needed will vary from student to student. In the formal, exam-oriented courses many students may know exactly what they want; others will need a great deal of advice. For courses which do not lead to examinations and do not fit the formal patterns of education, most students will need more detailed advice. They may have come for help because they have seen or heard about the results of some educational activity in the neighbouring village. The institution must be prepared to explain the purposes of the programme and the conditions under which the course is made available. These may include the minimum number of participants required, availability of a meeting place, or the need to find a literate person who is willing to be trained as a group leader. The discussion may not be completed in one meeting, and a number of meetings at appropriate times may have to be arranged.

For example, the British Open University (OU) officially does not set any educational qualifications as entry requirements. Once applicants have been selected, the university arranges for them to meet members of the tutorial staff based at the regional office nearest to where they live. At that meeting the tutors discuss with the students the courses which are available, which courses suit each student's individual interests and abilities best, how many courses they can and should take, what is expected of them and what services are available to them. In some cases the tutors advise the students that they are not likely to be successful and should postpone entry till they have completed some preparatory courses. They advise them what to take and where and how to take it.

The National Extension College Jobmate programme, on the other hand, offers a more thorough but more informal counselling service to unemployed young people in London. It arranges that all who contact it are put in touch with volunteer counsellors who advise them individually on how to look for jobs and on a whole range of educational or training opportunities which might be suitable.

Many other institutions do not have such an elaborate regional organisation. They can only provide information and advice to new or prospective students by post. They send them a list of the courses available; they ask them to fill in and send back an application form which gives details of their educational experience; they give them a handbook which describes the methods of study, what they are expected to do and how to get help. They correspond with them about what and how many courses to choose, how to pay for them and how to obtain additional assistance. In many cases, including the British OU, students are given a short period to try out the course they choose before having to pay more than a small administrative charge for it.

### EXERCISE B

List below two distance-teaching institutions, if possible working at different levels, with which you are familiar. Then answer the three questions which follow by putting a tick in the appropriate space under each question:

| | 1 | 2 |
|---|---|---|
| Name of institution | | |
| Level at which it offers courses | | |

(a) Does it provide help and advice to its potential students before they enrol for and start their course(s)?

| | I | 2 |
|---|---|---|
| Yes | | |
| No | | |

(b) If 'yes' to question (a), does it offer such help and advice from its central office, or through local (regional or district) tutors?

| | 1 | 2 |
|---|---|---|
| Central | | |
| Local | | |

(c) If 'yes' to question (a), does it offer such help and advice by means of face-to-face meetings between its staff and the students or by post, telephone or radio? If by any other means, please state.

| | 1 | 2 | | 1 | 2 |
|---|---|---|---|---|---|
| Face-to-face | | | By radio | | |
| By post | | | By other means (describe) | | |
| By telephone | | | | | |

COMMENT

The answers to this exercise obviously depend on which institutions you choose. We do not know which they are. The important point, which we hope is reflected in your answers, is that there are many ways of providing pre-course counselling, depending on the circumstances in which the students and the institution work, but that all institutions must find some way of doing so.

**Tutorial advice on subject matter**

The most obvious form of tutoring relates to the subject matter of the course which is being studied. In the traditional classroom the teacher performs two main functions - to provide new knowledge and new information and to assist the students to understand and learn that information. The last function is performed by questions and answers, by exercises and correction and by discussion. In a distance-teaching system the materials carry out the first function. But the student may not understand the text or the programme, or have questions to which he needs answers. It is the job of tutoring to provide such help. By its nature, distance teaching divorces this from the former function, usually in both time and place, and often the two functions are performed by different people. It is the tutor's job, then, to provide an opportunity for questions to be answered and for doubts and misunderstandings to be raised and cleared up. One means is the correction of written assignments; another is the organisation of face-to-face seminars and tutorials where discussion can take place.

For example, the University of Lagos in Nigeria provides two kinds of tutorial advice to its correspondence students: all courses include regular written exercises which have to be sent to the headquarters in Lagos, where they are corrected and commented on (in writing) by university teachers in the relevant department, some of whom were involved in writing the courses. These corrected assignments are sent back to the students through regional study centres. In the latter, once every three of four weeks, students have the opportunity to meet local tutors, who are graduates in the relevant subjects but are not necessarily university teachers. These tutors, in face-to-face meetings, advise the students on problems they have met while studying, including those reflected in the written assignments received back from Lagos. (For more details of this example, read Case Study 15.)

Another example comes from Abidjan in the Ivory Coast, where there is an institute, called the Institut Africain pour le Developpement Economique et Social (INADES), which offers basic agricultural and social education by simple correspondence courses, to peasant farmers and their families in many francophone countries in West Africa. It provides its students, many of whom are illiterate, with tutorial advice about the subject matter of their coures in two ways. First, individual students, or groups of students studying together, fill in correspondence questionnaires at the end of each unit, or topic or pamphlet, which include questions which show whether they have understood what they have learned, others which show the experience and results of putting their learning into practice, and others which give them a chance to report on any problems or questions they cannot solve by themselves. These questionnaires are sent to regional centres where specialist tutors mark and comment on the students' achievements and problems. These comments and advice are sent back to the students for further study. Secondly, groups of students are put in touch with local extension workers who can help them solve the practical problems they encounter while working on their courses. Sometimes the extension workers act as group leaders, sometimes they only visit the groups occasionally. In some cases it is the extension worker who is registered as the student and she uses the course as the basis for teaching members of a group with whom she is working. The questionnaires are completed on behalf of the group by the extension worker, and the advice to the group is transmitted through the extension worker. Third, INADES has its own fieldworkers who visit students at home. Although such visits are infrequent, they serve to encourage students and help them feel proud of their achievements.

Tutorial advice on subject-matter is equally essential in nonformal education and in academic courses, but its provision in the latter is more common. There are many different kinds of provision: postal assignments marked by tutors and then sent back to students, a student newspaper in which common problems are discussed, face-to-face meetings at study centres, short residential courses, and, in some places, telephone or cassette taped tutorials. More details about some of these different kinds of tutorial service are given later in this Unit.

### Non-subject counselling

The student may have problems which are not related to the teaching materials but which clearly affect her work. Getting hold of reference or additional reading materials is one. Or she may get frustrated and lose her motivation because she has no one to talk to and compare notes with, or she may feel inadequate to cope with the expected work load. Then there are problems of a personal nature: poor physical setting, poor health, family pressures, lack of money for fees; which tend to discourage the student. And there are other problems of an administrative nature: the materials do not arrive on time; she cannot get to study courses or group meetings at the right time; she does not know how to exploit local facilities to the full, or where they are available or how to get access to them; she is changing her job and address and wants contact with fellow students or tutors in a new place; or, quite simply, she does not know how to study effectively. Sometimes such problems are expressed to and can be solved by the subject-tutors. But they cannot always be easily detected, nor can they all be dealt with by the tutor. Many of them, especially delicate problems of a personal nature, need to be tackled by someone with special responsibility within the institution, usually a full-time student adviser. Some of them can be tackled through correspondence, while some need direct personal attention, which is often not easy to arrange, especially when students are so scattered. On the other hand it is sometimes possible for the student adviser to recruit part-time help locally from people who do not have specialist subject expertise, but are ready and qualified to offer personal counselling to students.

When you answer the questions in the exercise that follows you ought to keep in mind the kinds of problems students face. What kinds of problems are dealt with by (a) the student adviser or his staff, (b) the subject-tutor? What kinds of problems are amenable to group counselling and what to individual counselling? If possible, choose one example of an institution that has regional offices and contrast it with one that does not. It would also be good to pick one example from the third world and one from the developed countries, and see the difference in their operation.

**EXERCISE C** : Complete this chart with details of tutorial advice and non-subject counselling offered by two distance-teaching institutions with which you are familiar. Fill in the first four rows and the final one, and tick the others as appropriate.

| | 1 | 2 |
|---|---|---|
| Name of institution | | |
| Level of courses | | |
| Who gives tutorial advice? | | |
| Who gives non-subject counselling? | | |
| Face-to-face? | | |
| At a distance? | | |
| At HQ? | | |
| At local centres? | | |
| By post? | | |
| By telephone? | | |
| By radio? | | |
| At residential courses? | | |
| By other means (specify)? | | |

COMMENT

Your answers will almost certainly demonstrate an organised pattern of subject tutorial advice. It is likely that this will come from both centralised and regional or local tutors. Counselling is generally most effectively provided by means of a centralised and full-time student advisory service which receives, in fact stimulates, queries from students and provides individual advice and help. As many problems are common, the student newspaper we mentioned on page 69 can be a very useful vehicle for suggesting solutions.

We must remember, however, that there are some problems for which both subject and general advice are needed, and for which they cannot be distinguished. In many institutions, therefore, the same department, or staff member, is responsible for both tutoring and counselling.

## Follow-up counselling

Most adult students enrol for a course because they expect to obtain some direct improvement to their lives through it. This may be promotional prospects arising from better qualifications; improved vocational or life-skills; or increased productivity; or the enhancement of leisure activities. If any of these are reasons for enrolling, it is vital to the continued motivation of students that they should be able to see that they are achieving their objectives. Occasionally students seek advice about how to apply what they are learning to their lives. Sometimes they need careers advice, sometimes vocational or social extension (e.g. agricultural, or health, or employment extension). Or they may need advice about other courses which could be taken to follow up what has already been learnt. The student adviser should make it his job to encourage students to seek such advice, make opportunities available for them to seek it, and to have the necessary information at his disposal.

For example, in Honduras, in Central America, there is a radio school called Accion Cultural Popular Hondurena (ACPH). One of its programmes is an agricultural promotion programme, in which technical advice on agriculture and advice on the formation of co-operatives is given to peasant farmers by means of radio and print. In order to help the students, who work in study groups, to learn more effectively and to apply what they learn to their lives and farms, a team of para-professional advisers has been created. They visit groups to help them with their administrative problems, to give them basic agricultural demonstrations and to encourage and help them to put the advice into practice and to form and run co-operatives.

## What help can be provided at a distance?

One major distinction ought to have become clear from the exercises you have done so far in this unit and the examples you have read. It is that between tutoring or counselling services provided at a distance and those provided face-to-face. It is a distinction which has more administrative than academic significance. All four types of advice listed on page 65 can be provided either by post or through direct personal contact. The method chosen, however, will be determined largely by the resources available, and the choice itself determines the administrative pattern of the student advice section of a distance-teaching institution. Let us look first at services made available at a distance.

The essence of distance tutoring is to find ways of offering personal advice to individual students, in response to their specific needs, without face-to-face meetings. This naturally involves a dialogue between student and institution. So the communication channels must be two-way, and the advice cannot be pre-packaged in the way that the teaching materials are prepared.

### 1. Correspondence tutoring

The most common form is based on student assignments included in the teaching materials, carried out by students and sent back to the centre, marked and commented on by tutors, and returned to the student. The quality of a correspondence college almost certainly depends on the quality of its tutors, and their ability to transmit to their students a sense of personal interest and concern for their work through the comments they make on it. This in turn requires very careful selection and briefing of tutors, and continuous supervision, to ensure both quality and regularity. The two most common faults, which are likely to create high student drop-out rates, are delays in correcting and returning assignments and incompleteness or unhelpfulness of comments.

### 2. Tutoring, not marking

The nearest parallel to correspondence assignment correction for most people is examination marking. In function, however, the two could not be more different. The purpose of marking public exams is exclusively to assess performance; anonymity is an essential ingredient. Correspondence correction is a vehicle of teaching; its purpose is to help the student and the institution to assess progress so that doubts and misunderstandings can be clarified; the establishment of a personal relationship is vital. An illustration of the point comes from the UK National Extension College : a married student inadvertently sent in a drawing by her three-year-old son along with her essay assignment. The essay came back from the tutor with detailed comments, and so did the child's drawing! The student immediately recognised that the tutor, 2 000 miles away, was a human being, with a sense of humour and an interest in her and her family. The system must encourage such personal communication.

### 3. Part-time or full-time tutors?

A major dilemma for the administrators of a distance-teaching institution is whether to create a team of correspondence tutors who work for the institution full-time or to recruit part-time tutors. The advantage of full-timers is that they are on the spot all the time and there should therefore be a minimum of delay in dealing with students' assignments and returning them. It is also easier to exercise control over the style and quality of the tutoring of full-timers. On the other hand full-time correspondence tutoring is an extremely boring and repetitive job. You are unlikely to be able to recruit and hold good teachers to spend the whole of their time responding to the written assignments of students at a distance, and, as we have already suggested, high quality tutoring is a crucial element of effective distance teaching. In many institutions, moreover, there are not enough students in many courses to occupy a full-time tutor. So most units recruit part-time tutors for postal tutoring. In this way each tutor carries a small load of students with whom, in theory, he can develop a personal relationship. Also, the unit can seek out and limit itself to the few best tutors in any given subject. But the problems with part-timers are difficulty of control and the dangers of delay. Institution after institution reports complaints from students that their assignments are delayed. When they check they find that the delay is caused by the part-time tutor; either the assignments reached him when he was away; or he claims they did not reach him until well after the records state; or he was much too busy with his full-time job, and something - his part-time responsibility - had to give way; or he is quite simply not sufficiently interested and committed to the students, and not well enough paid, to bother to try to keep to the deadlines. Under pressure to comply he will resort to superficial marking and slipshod tutoring. Two compromise arrangements are sometimes tried. First is the attempt to set up workshops, at the institution itself, where tutors come at fixed times to deal with assignments which have been sent in. However, this imposes a rigidity on the work and scheduling of both tutors and students which is ill suited to part-time distance education. The second is an attempt to increase personal supervision and liaison with part-time tutors through a system of full-time course development officers, or subject-area tutors, who have overall responsibilty for academic standards in a subject or a series of subjects, who do some postal tutoring themselves, and who supervise and support the part-time tutors in their work.

## 4. Student and tutor records

Because the students are at a distance, it is essential that the most accurate records possible of their progress and performance, and of their special problems, should be maintained in a form which makes that information readily retrievable. This is even more necessary when their tutors are largely part-time staff and subject to change. Staff conferences about individual students such as are held in face-to-face schools can only take place about distant students if there are accurate and up-to-date records. It is equally important, with part-time tutors, that efficient records are maintained of dates when students' work is submitted to and received back from these tutors. Without such records adequate control is impossible. At the National Extension College in the UK, students submit their work direct to their tutors; only after completion does the work, together with the tutor's assessment and comments, pass through the central institution for recording, on its way back to the student. A 'shuttle-card', however, records when it started on its journey from the student. The advantage of this system is that it cuts out one stage of posting. The disadvantage is that the college only discovers after the event (or when a student complains) that a tutor has been sitting on the student's assignment. This has led many institutions to insist that a student's work passes through the centre on the way to and from his tutor.

## 5. Telephone tutoring, two-way radio, and broadcast student forums

Three somewhat more exotic forms of distance tutoring need to be mentioned. The first is becoming increasingly common in America, Europe and Australia. It is a system whereby a group of students are linked to a tutor by telephone conference-line to discuss their work and their problems. In most third world countries, however, telephone communication, especially long-distance, is a luxury to which students do not generally have access, nor will they in the foreseeable future.

In Australia and Canada two-way radio through flying doctor schemes and community health networks has been used for a variety of educational communication. In these schemes local community health workers can call a central hospital or medical headquarters by two-way radio, and report health problems which they cannot deal with from their own experience. Sometimes a doctor will give them advice and instructions over the radio in reply, to enable them to treat the problem themselves; where it is too serious a doctor will be sent by plane to carry out the treatment or to remove the patient to hospital. The pattern has now spread to several other countries, some of them in the third world. But the technology is still too complex and too expensive to be easily replicable in many parts of the world. Its potential for distance education, however, is enormous, and, with the development of cheaper communications technology, access to it for educational systems in most countries cannot be far away.

## CASE STUDIES

If you are interested in learning more about either of these systems you should now read Case Studies 7 and 8.

Finally, there is the pattern of radio (or television) student forums as part, perhaps the central part, of broadcast series for distance students. In these, on a weekly or monthly basis, the most common student queries and problems received through the post are given air time, and presented to specialists for broadcast advice or solutions. Such programmes have the added advantage, one of major importance, that they prove to isolated students that their problems, which they thought were theirs alone, are shared by many others.

## EXERCISE D

Examine the tutoring system of your own institution, or one with which you are familiar.

(a) List as many different forms of distance tutoring and counselling as you can.

(b) What are the major problems in distance tutoring and counselling your institution faces?

(c) Does it rely mainly on part-time or mainly on full-time tutors and/or counsellors?

(d) Would an increase in the use of the opposite (i.e. full-time or part-time, whichever is not used now) help to solve these problems?

(e) How would it be organised?

COMMENT

As with many of these exercises, your answers will depend on the nature of the programme you have examined and the circumstance of the country in which it is based. In Mauritius, for example, there is a very reliable postal service and no assignment or tutor's report has to travel more than 30 miles; in some countries, on the other hand, postal services and distances create unacceptable delays and alternative methods of delivery have to be found. One point emerges, however, common to all distance tutoring: students must be able to rely on receiving comments on their work and answers to their questions before they have had time to forget what their problems were. Efficient organisation of the movement of student work and a control mechanism which quickly finds out about delays are crucial.

## What face-to-face services can we provide?

We have already referred several times to the dangers of isolation facing the distant student. The most obvious solution to this problem, and one that is becoming increasingly common, is to arrange for distant students to meet each other and their tutors at regular intervals throughout their courses. There are a variety of ways that this can happen and a variety of functions such meetings can serve. They can be used to overcome problems of isolation, and to provide for the practical aspects of a course, for example, in science, language or technical courses. Or they can be used to give students an opportunity to discuss and sometimes to apply what they are learning together. There are a number of ways in which this is done, among them self-help study groups, study centres, and course, for example, in science, language or technical courses. Or they can be used to give students an opportunity to discuss and sometimes to apply what they are learning together. There are a number of ways in which this is done, among them self-help study groups, study centres, and residential courses. We shall discuss these below.

Before doing so, however, it is important to make two general points: first such meetings involve considerable effort, organisation, time and often expense for the students, and they will be unwilling to make the effort unless the meeting is obviously purposeful and well organised to give them immediate help in their studies; secondly face-to-face services are expensive and the costs increase proportionally with the number of students - there are no economies of scale to be realised. Let us look at some of the different arrangements for face-to-face learning.

### Self-help study groups

One of the most regular features of nonformal education at a distance is the study group. It is the basis of the rural forums of Canada, Ghana and India, of radiophonic schools throughout Latin America, and of mass radio campaigns in Botswana and Tanzania. In such circumstances it is a method of bringing together groups of people who want to study the same subject - such as agriculture, health or politics. The teaching materials are made available to the group, who study them together without a teacher present. In many countries the participants in such nonformal education are often illiterate.

Study groups of students without a teacher are also used in somewhat more academic distance-teaching projects. Students can usually help each other by sharing their study problems and their knowledge.

There are four main administrative tasks involved in organising distance-teaching study groups:

reliable distribution and reception of radio and print;

selection and training of group leaders;

creation of a network of local organisations which will administer and support the group leaders throughout the course, especially in any practical activities resulting from it;

establishment of an efficient records system from which information about each group's progress and activities and about their needs can be obtained.

CASE STUDIES

If you are interested in finding out more about study groups Case Studies 9 to 12 will help. The first is from a manual on radio learning group campaigns and is based on the experience of campaigns in Botswana. The second is a description of a radio school in Colombia, and the third reports a survey of group work in Tanzania. The fourth outlines how study groups should work in a project which has just started for Namibians in exile in Angola and Zambia.

COMMENT

Several important characteristics emerge from these case studies, which determine the administrative services they require:

(a) The group leaders are often fellow students in the group. They are just as involved in learning as the other members. They have been chosen as group leaders because of their experience of running meetings, their local status, or purely at random. In some situations, as in Colombia and the Namibian case, they are one or two stages ahead of their colleagues in their knowledge of the subject matter. They are there to help and guide them, but they are not, and must not attempt to be, their teachers.

(b) They can only operate efficiently if the materials they are studying, and special group leaders' notes to accompany them, spell out what they are expected to do, what arrangements they are supposed to make, what forms they are expected to fill in and so on.

(c) They need regular visits and support from tutors or organisers to encourage them and to ensure that they are meeting regularly and carrying out their tasks. Experience suggests that if they are left to their own devices for long periods many will lose heart and cease to function.

(d) Group leaders need training in discussion-leadership techniques, in the use of materials and equipment, in the administrative role and on the content of the materials (especially where and how to find out more or to seek answers to the groups' questions and confusions).

(e) Study groups can be effective bodies for turning learning into action; if that is required of them they must be given clear guidance in how to do so, and access to the equipment and materials they need for whatever actions they decide to take.

## Study centres

Another way of arranging for face-to-face meetings, especially common in more formal education, is to set up a network of local study centres throughout the country. Students must be close enough to the centres to be able to visit them from time to time for tutorials or study group meetings. In most cases study centres can be based in existing institutions, such as schools, teachers' colleges, community centres or farmers' training centres. They do not require full-time staff or full-time facilities. Sometimes the existing facilities are adequate for the distant students' needs; all that is needed is permission to use them in the evenings or at weekends for part-time students and arrangements for the use of equipment or supplies. In other cases it is necessary to supplement existing facilities with, for example, special kits or book collections or audio-visual equipment for the exclusive use of distant students. In such cases distribution, control and security arrangements have to be made. The main administrative burden is the arrangement of scheduling and supervision of meetings and of the activities, such as tutorials, practical work, group meetings or private study, which are likely to take place. A common problem in the use of part-time study centres is that there is a conflict of interest between the institution's full-time staff and students, and the part-time distance-teaching staff and students. Inevitably, if such a clash occurs, the interests of the distance-teaching students come second to those of the main users. Such conflicts can be kept to a minimum only by close liaison between centres, and by close supervision of the study centre activities. If an institution plans to rely heavily on study centres and needs many such centres it will also need full-time staff to look after then.

## CASE STUDIES

Case Studies 13, 14 and 15 are about study centres. If you are particularly concerned with this kind of support, read all three. If not, select one of them and read it.

## COMMENT

We want to draw your attention to two features of study centres illustrated in the case studies.

1. Practical work : A common reaction to distance education is that it is effective for theoretical and academic study but that it cannot cope with subjects which require practical work. It is, therefore, assumed that it is inappropriate for science, technical and vocational subjects. This argument can only be disproved by making arrangements, within the course, for practical experiments and practical work to be carried out. Some of this can be done by means of home experiment kits which students use by themselves. Much of it, however, requires supervision and face-to-face demonstration. Opportunities for students to do their practical work under guidance must therefore be provided. Sometimes this is one function of the study centres; in other situations arrangements must be made for students to visit and make use of local laboratories or workshops, on a fixed schedule and under supervision.

Common resources which are not fully exploited are school laboratories and workshops. It should be possible to persuade the ministry of education to instruct local administrators and head teachers to allow school laboratories and workshops to be used by students of distance-teaching institutions, if the latter are an integral part of the educational system. Another way of ensuring that students get a practical training is to arrange for them to do practical work at garages, woodworking and metal working establishments, and working laboratories. Courses must be written according to such schedules and it is the institution's administrative responsibility to ensure that the schedules can be followed both by the students and by the local agencies offering the facilities. The latter are unlikely to provide such services for nothing, and almost certainly not without replacement of equipment and materials used by the distant students.

2. Local tutors : Perhaps the most important face-to-face service which students look for, however, is a regular opportunity to meet local specialists in the subject they are studying. They want to be able to ask questions about their study materials, to find out if they have understood things correctly and to seek guidance - and reassurance - on the work they are doing. A local face-to-face tutorial system can provide this help. But such local tutors are tutors, not lecturers, and must be recruited and trained to perform that function. If they teach their students without carefully following the printed course, they are more likely to confuse than to

help. This in turn means they must be fully familiar with the course and be kept in the closest automatic contact with their students' progress and performance on it. Careful administrative co-ordination will be needed, and such tutors may need to see students' work on its way back, after postal tutoring, to the students. Or it may be better, if the local tutors are qualified to do so and if an efficient system of supervision can be devised, for them actually to mark and comment on the written assignments, rather than distant tutors doing so by post. In many situations there are not enough adequately qualified tutors close enough to the students to perform this function. People can be recruited as local tutors who have enough education in the subject to be able to help students understand their materials or find solutions to personal difficulties in doing their work, but do not have enough knowledge to teach the course themselves or to tutor the assignments. They still need to be fully familiar with the course and the students' work and to be made to feel that they play, as they do, a vital role in the teaching system.

For example, in the radiophonic schools of Radio Santa Maria (RSM) in the Dominican Republic students are expected to listen to their radio programmes each day and to follow the exercises in their textbooks by themselves. Each weekend, however, they meet together in a group led by a field tutor. The field tutor is not a teacher. He is probably a young adult who is himself a student at a slightly higher grade. Often he has studied through the radio school's courses. The weekend meeting is an opportunity to raise, discuss and, if possible, solve problems individual students have met during the week. It is also an opportunity to emphasise the relationship between what has been studied and the students' economic and social life. The field tutors are able to lead both these activities. They are given careful instructions on how to do so, and they have to submit regular reports to RSM's offices. They are paid a small honorarium out of the fees they collect from students.

## Residential courses

Many distance-teaching programmes include a period when students come together to study intensively in residential accommodation. These range in duration from a weekend course to a month or more of summer school. They may be optional or compulsory. They are usually taught by course writers and tutors, but it is also important for student advisers, or counsellors, to be on hand to develop the personal relationships without which counselling is extremely difficult. A crucial problem is deciding what goes into the content of a residential course. Such courses help to build student morale, self-confidence and motivation. Students begin to recognise that they are part of a larger group, and that their problems are neither unique nor peculiar. Academically they help their understanding, and their study habits. It is often difficult to arrange residential courses in which all students can participate, because of work commitments. Furthermore, when students are studying at different speeds it is difficult to find many who are at the same stage. The courses must therefore be planned a long time in advance, giving ample time for students to arrange their study timetable and their personal affairs so as to attend and benefit from them.

On way of using residential education as part of a distance-teaching system is for students to do part of their courses at a distance and then come into residence for the last term or year of their studies. This applies in much university-level study in the Soviet Union and in the USA. It also applies, at least at the present time, in the University of Zambia. These requirements obviously restrict the numbers admitted to such courses to those which, after allowing for dropout, can eventually be brought into residence. At the other end of the spectrum are occasional and voluntary weekend seminars on specific and limited aspects of a course.

In nonformal education, where face-to-face meeting is often an integral part of the course, residential courses are used mainly for group leader and monitor training. Thus, for example, the radiophonic schools often bring prospective monitors into a central institution for a period of several weeks or months to train them for their responsibilities. In the Namibian Extension Unit it is planned to run one-week residential training courses for group leaders before each new course or project starts. In Tanzania and Botswana training courses for group leaders in the study group campaigns were often staged as residential weekend courses.

### EXERCISE E

(a) List the face-to-face facilities and activities provided to students by your own institution or one you know well.

Course or programme

Type of facility/activity

Who is in charge?

Number and type of staff involved

Full-time or part-time?

Local or central?

How often available?

(b) What problems occur in this provision?

(c) How could the services be improved?

(d) What would be the administrative implications of such improvements (e.g. for staffing, facilities, costs)?

COMMENT

It is likely that your lists of services, problems and possible improvements highlight yet again the three questions which have occurred so often in previous units in this manual and in previous sections of this unit.

1. What facilities does our institution need of its own and how far can it rely on other institutions for books, equipment, accommodation, workshops, libraries, laboratories?
2. What part-time staff can it employ to tutor its students, and what full-time staff does it need?
3. How can it supervise its own staff and facilities and how can it liaise with other institutions for the supervision and use of theirs?

We suggest you look back at the headings and sub-headings on pages 75-79, and re-read the sections which apply specifically to problems you have highlighted in your answers.

## What have we learned?

Most of the activities discussed in this unit are usually carried out by part-time staff. Many of them are occasional activities and involve communication, or at the very least, co-ordination, over long distances. They are therefore heavily dependent on an efficient administrative system. When such systems break down it is probably usually not the result of tutorial incompetence or because the methods or materials are ineffective, but because of an organisational or administrative failure. As in any flexible but efficient administrative system, the organisation must be created to meet the demands of each particular situation and will vary greatly from one institution to another. We believe, however, that there are three sets of questions which must be answered, or at least borne in mind, when devising, reviewing or strengthening a system of student services in most distance-teaching projects.

### 1. Field organisation

Does the system (a) require and (b) justify a network of full-time regional officers?

If yes, what should be the balance between their academic and administrative resposibilities?

How wide an area can one officer/team cover?

If no, what part-time supervision and organisation is needed/can be recruited?

What central organisation/staffing is required to operate the field organisation chosen?

What records systems are needed, and where (i.e. what records are needed at regional level and what at central level)?

2. **Links between teaching staff**

What links/meetings/co-ordination are needed:

(a) between tutors and writers?

(b) between postal tutors and local tutors?

(c) tutors and counsellors?

(d) full-time and part-time staff?

How can such links be arranged, and how often?

3. **Recruitment, training and incentives**

What qualities and qualifications are needed respectively for full-time staff, part-time staff; tutors, counsellors; postal, local tutors?

What kinds of training - courses, manuals, conferences, advice - are needed and can be provided for each category of tutorial staff?

What rates of pay are adequate for part-time tutoring, part-time writing, vacation-course tutoring, etc., and what comparable rates exist on which they can be based?

## ASSIGNMENT 5

(If you are following the manual in a group these exercises are primarily intended for group discussion. If not they can be answered in the form of a descriptive essay.)

Work out details for full-scale tutoring and counselling systems for two of the following four types of distance-teaching project. They should provide for both face-to-face and at-a-distance student/tutor contacts. In all cases discuss your conclusions about what services are possible and/or necessary if you have a network of regional offices at your institution's disposal, and what can be arranged if no such regional network exists.

### A. Formal

Post-secondary-level in-service up-grading project for science and maths teachers; courses include both science subject-matter and method and pedagogy training. They consist of correspondence materials, weekly radio programmes, practical assignments and an annual two-week residential course. The whole course lasts for two years per student, and is carefully paced, though there is an opportunity for students in special circumstances to take three years over their studies. All students are teaching in secondary schools, but many are in small, badly equipped private or community self-help schools. The schools are all over the country; mainly in towns, but many of the towns are small. There are teacher training colleges and technical colleges in all regional headquarters, but many of the smaller secondary schools are up to 100 miles from such regional centres. In most towns there are at least six registered or potential student-trainees.

### B. Formal

Secondary-level qualification courses in nine main subjects (including two languages, three sciences, social studies, maths, woodwork, agriculture). Students must take a minimum of four subjects. The courses are aimed at any post-school-age students (i.e. 15+), including primary-school leavers. There are three levels of courses and, therefore, three entry points to the system. There are very large numbers of eligible students scattered throughout the country, both in urban and rural areas. Providing equal opportunity to rural school-leavers is one of the main purposes of the project, and it is therefore essential to make available the necessary texts and access to some form of library service and practical work facilities in the science and technical subjects. Correspondence courses and radio support series are the main teaching vehicle, but regular face-to-face guidance is also felt to be necessary. It is assumed that courses should be largely unpaced.

### c. Nonformal

Training and advisory/support courses for village-level rural medical workers. No fixed entry qualifications: most are ex-primary-school but untrained in medical work. Most have worked in rural clinics for many years, and are the only permanent health service available to villagers. There is generally only one such worker (i.e. potential student) for two or three villages. The courses are highly practical, teaching primary health-care skills. However, they also set out to teach the biological, chemical and medical science essential to an understanding of the work. An important part of this and, therefore, of the course is preventive medicine - e.g. nutrition, child care, hygiene, etc. Such course material links what the students are being taught with visual aids and teaching materials to be used in their medical extension work. The courses consist of short, modular correspondence booklets, equipment kits and instruction manuals, and a regular radio service. Each module is designed to be self-contained and can be studied independently of the others. An accumulation of twelve successfully completed modules leads to the basic professional medical work qualification.

### D. Nonformal

A campaign on improved methods of food crop production - vegetables, rice, poultry - is being conducted by the Ministry of Agriculture. It is aimed at peasant farmers - both men and women - in the villages. Most of the potential audience are illiterate and poor, and are very rarely exposed to traditional agricultural extension methods. A primary purpose of the campaign is to reach the poorest, smallest scale and most traditional farmers. It is centred around regular twice-weekly radio programmes in each of the six major languages. These are supported by simple booklets with plenty of illustrations, which include report forms/questionnaires to be returned to the central production unit (attached to the Ministry of Agriculture Extension Aids Department) by post every two weeks. The radio programmes and the booklets are to be used in groups led (or at least guided) by a literate member of the village. The system has the full support of the Ministry's extension service, in which there are well staffed district office with specialist rice officers, poultry officers and vegetable officers, and a thinly spread network of not-very-highly-trained village-level workers, almost all men, each one covering ten villages. There are district farmers' training centres, where group leaders can be trained.

Your discussion and reports should cover the following points:

1. Organisational arrangements needed at the institution's headquarters and at regional/local level.

2. Need to create your own (the institution's) facilities and your ability to use existing services, etc. - what is needed?

3. The use of part-time staff in the system:
   what characteristics are required of staff,
   what training is to be provided?

4. Supervision of, liaison and contact with regional and local centres and with part-time staff.

5. Records required - of students and of tutors/counsellors.

6. The need to provide both for academic (i.e. course-related) tutoring and general (i.e. study-related and personal) counselling.

# PART II: THE ORGANISATION OF DISTANCE TEACHING

In the five units of Part I we looked at the methods of distance teaching and their management. In each unit we considered different ways of organising the media and at the advantages and disadvantages of each approach. We stressed throughout that external factors - the circumstances and the educational system a distance-teaching programme is working in and the purposes and students for which it is created - will and should determine which choices you make both between media and between ways of organising them.

We now move on to examine how these choices will be reflected in the organisation of the whole programme; how the various parts and media fit together into an overall administrative pattern. We look first at the internal organisation of distance-teaching institutions, then at organisational relations with others, and finally at ways of working out the costs and budgets of such programmes.

# Unit 6: Internal organisation

This unit examines different ways of running a distance-teaching institution and the administrative structures these entail. We shall consider the following questions:

What determines the internal organisaton of a distance-teaching institution?

What are the functions of a distance-teaching institution?

What departments do we need?

What information is needed and how can it be recorded and made available?

What staff do we need, and what skills should they have?

How can we encourage good staff relations?

How can we provide training for staff?

In any administration there is a danger that purely administrative considerations are regarded as more important than the concerns for which the organisation was set up. In the case of a distance-teaching institution this could mean that organisational considerations outweighed educational policy. We hope this unit will help you to prevent this from happening. As a result of working through the unit, you will be able to:

1. describe various ways of organising a distance-teaching institution: departments, staff, records and information systems;
2. choose the most appropriate patterns for particular programmes;
3. design and establish a system for your own institution;
4. draw up proposals to improve the administrative structure of an existing institution.

## What determines the internal organisation of a distance-teaching institution?

The purpose of a distance-teaching institution is to teach students. The danger of adopting inappropriate administrative procedures is particularly great because the students are not present to ensure that their interests are taken into account. For example, a decision might be made to instal a records system which tied in neatly with the traditional government accounting system, but which, for that reason, slowed down the return of marked assignments to students. By the time the students' reactions become known, it might be difficult or impossible to make changes. An organisation that does not have an efficient administration cannot serve its students properly. As student needs change with changing circumstances, so the administration must be prepared to change.

## EXERCISE A

What qualities would you look for in a good administrative system for a distance-teaching institution? List as many as you can below.

## COMMENT

There are six key factors to consider in designing an appropriate administration.

1. **Efficiency:** The administrative system must be such that the right things happen at the right time.

2. **Responsiveness:** The system must be immediately responsive to the needs of its students.

3. **Flexibility:** In order to be efficient and responsive, the system must enable change to take place in the face of changing needs and circumstances.

4. **Control:** Good control over the whole operation will help ensure efficiency. Control needs to be exercised over:

    the educational standards of the materials and tutorial services;

    the regularity and effectiveness of the delivery system;

    the departments, their staff, and communication between them and with the students.

5. **Ready access to information:** Control can only be exercised if all concerned - staff and students - have ready access to the information they need to do their work and to make decisions. The flow of information between students or potential students and the institution, between different departments within the institution, and between members of staff is therefore also of crucial importance.

6. **Cost:** The administration must not be disproportionately expensive.

In the next section we shall examine how these six key factors operate at different levels of administration.

## What are the functions of a distance-teaching institution?

In a very small institution each individual member of the staff performs certain specific functions, but as a team all members are aware of what the others are doing. There is often no need to divide into departments. The staff may work together when more than one person is needed to perform any particular function. This is often true of a distance-teaching institution when it first comes into being. It is in effect one department. As an organisation grows, however, and the number of staff and the volume of work increase, it becomes impossible for everyone to be involved in all activities. Jobs get done more quickly and more effectively if the work is clearly divided between groups of staff members whose functions and skills are closely related to each other. Hence the growth of departments. The pattern of departments should, as nearly as possible, follow the pattern of functions the institution has to carry out.

### EXERCISE B

List below the main functions which your institution performs. When you think you have listed as many as you can, put against each function the department which carries it out.

| Function | Department |
|---|---|
| | |

Are there any departments in your institution which do not appear on the right? If so, add them and then decide what function(s) they perform.

COMMENT

Not all distance-teaching institutions carry out exactly the same functions. There are also several different ways of describing many of the most common functions. However, it is likely that most of those you have written down relate to the following list:

course development

course production

student recruitment

student counselling

organisation of study facilities and support services

tutoring and monitoring student progress

materials storage and distribution

general administration (e.g. direction, personnel and finance)

research and evaluation.

Most of these functions belong also to other institutions - schools and colleges on the one hand and broadcasting or publishing agencies on the other. A distance-teaching institution performs teaching functions which are associated with schools, but it has no students present, so it carries these out by means of production and distribution functions which are usually the jobs of broadcasting and publishing. It is this combination which is peculiar to distance teaching and which prevents it from following exactly the organisational or departmental patterns which characterise either group of institutions. But we must remember that many of the functions have their parallels in such agencies and we must be prepared to learn from them.

The nature of distance teaching, however, means that the teaching or academic functions, the production and distribution functions and the administrative functions are all associated with each other. For the students, who are the reason for the institution's existence, do not distinguish between these different aspects of the course of study they are following. The departmental structure of the institution, therefore, must reflect not only the functions but also the interrelationship between them.

This requires a carefully constructed system of linkages between departments which bring together academics, production specialists andtechnicians, and administrators. The following diagram illustrates how this can work. The academic departments are listed in the left hand column. The production and administration departments are listed across the top of the remaining columns. The broken lines show the lines of responsibility and involvement for each department: horizontal lines show the responsibilities of the academic departments; vertical lines those of the production and administration departments.

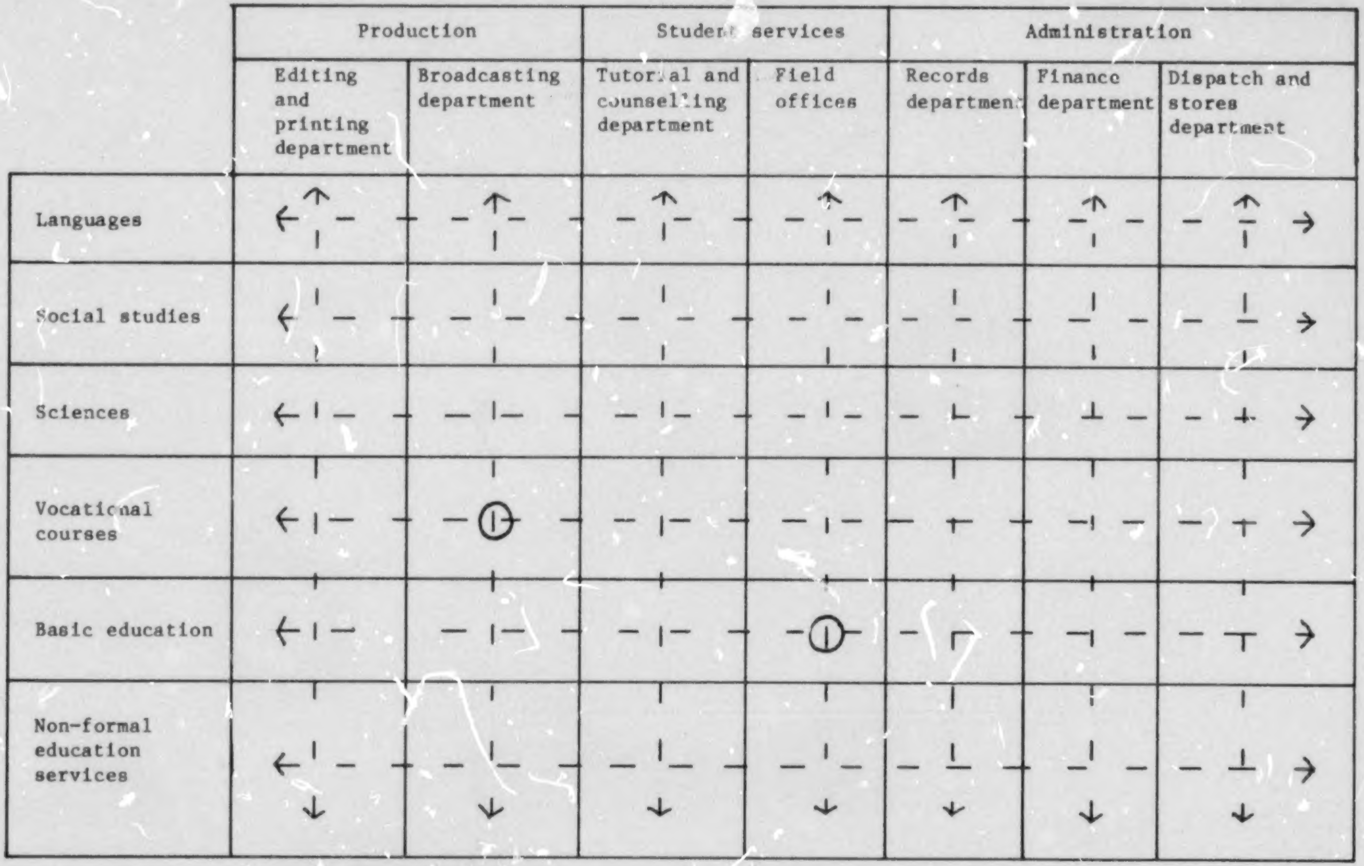
No attempt is made to list departments comprehensively. The diagram includes only the most common departments.

The possibilities for both co-operation and conflict between departments should be clear from the diagram. At any point in the production, distribution or teaching system there are two departments sharing responsibility. For example, if we look at the diagram for responsibility for radio programmes on bookkeeping we can work out that this is shared between the broadcasting department and the vocational courses department. Or if we look for study group organisation for literacy courses, we see that the field offices department and the basic education department are both involved. One way of ensuring co-operation and resolving conflict is the course team approach which we looked at in Unit 3, p.36, and in the case study on course teams in the UK Open University (Case Study ). You may like to read that again now. This leads us to a discussion of individual departments and their work.

## What departments do we need?

Traditional educational institutions are usually organised in subject departments or faculties. Many distance-teaching institutions divide their staff in the same way. The extent and elaborateness of the division depend on the size of staff, the number of students, the number of subjects offered, and the levels at which they are being taught. On the other hand many institutions, especially those that rely mainly on part-time writers and tutors, do not divide into academic or subject departments at all; others have broad divisions into subject areas, such as maths and sciences, languages, or vocational education. There is no need here to discuss in detail the functions of academic (or subject) departments. They are primarily concerned with the development of the content of teaching materials, the academic supervision of students and the academic control of the way materials are used and studies conducted. There is one more important administrative consideration, however, which affects the way such academic functions are organised.

This is the balance between full-time/internal academic staff and part-time/external staff. We examined it in detail in Unit 3 as regards writers and in Unit 5 as regards tutors. We must remember that the


Production
Student services
Administration
Editing and printing department
Broadcasting department
Tutorial and counselling department
Field offices
Records department
Finance department
Dispatch and stores department
Languages
Social studies
Sciences
Vocational courses
Basic education
Non-formal education services

workload varies markedly between the stage when courses are being written and that when courses are in use and the provision of tutorial services is the main regular activity. If the institution requires continuous output of course materials in a single subject it may be necessary to establish a department consisting primarily of academics writing and supervising those materials. If an institution is mainly offering existing courses and employing part-time tutors, a single department can probably cover the provision, supervision and occasional revision of subject matter in several subjects. Most institutions, however, need to have full-time academic staff who are sufficiently familiar with the subjects offered to be able to negotiate with subject specialists of other institutions in order to commission and supervise their work. This balance must be reviewed from time to time and the departmental structure changed according to these requirements.

## Production departments

We looked at these in detail in Units 3 and 4. Whether you have separate departments for all the media you use and how big they are will depend on the volume and complexity of your production load and the extent to which you are producing it within your own institution or arranging with some other institution to produce it for you.

## General administrative departments

A distance-teaching institution, by its very nature, usually has no students in its main offices. It often uses mainly part-time teachers as both writers and tutors. So what does it consist of? Its offices and full-time staff are usually concerned primarily with the production, storage and distribution of teaching materials (printed materials, films, tapes) and with the keeping of records. The administrative activities are often more obvious than the academic activities, although, as we have stressed, the former exist to make the latter possible. Let us now look at three different aspects of administration:

### 1. Direction

Most institutions have a head. The jobs of the head (whom we will call the director - although principal, or general manager, are equally common names) are mainly administrative, though it is one of the anomalies of education that people appointed to such positions are often better qualified academically than administratively. These jobs include the interpretation and implementation of policy, and in some cases its initiation, liaison at the highest level with other organisations and supervision of the running of the institution. It is vital to the health of an organisation that all three receive adequate attention. We have stressed throughout the need for interaction between departments, so that one of the functions of supervision is to oversee the co-ordination of work. It is impossible for a director to be a specialist in all the different functions of the institution, though a working familiarity with each of them is an advantage. Each department therefore needs a head of its own with specialist knowledge of its working, who is responsible for its supervision. A management committee of the heads of department, whether formal or informal, is the channel through which the director can most effectively ensure that such supervision is being carried out. It is also the vehicle through which the director can supervise the overall co-ordination of the institution.

EXERCISE C

If your institution has a management committee, list its members and describe the functions of the committee. In what ways does the committee assist the smooth running of your institution?

If there is no management committee, imagine you are creating one. Its function is to improve efficiency and exercise control over all aspects of administration. Who would you put on the committee? How often should it meet? How would it help your institution? If you feel there is no need for a management committee, describe how checks are made on the smooth operation of administration in your institution.

COMMENT

This exercise should draw your attention to issues in controlling administration. Rather than attempting to comment further on the issues now, we shall ask you to consider the whole administrative system later in the unit. If, however, you are working in a group, you may at this stage like to compare notes.

## 2. Finance department

The tasks that come under the heading of finance can be divided into two groups, broader and narrower. Broader work concerns the raising of finance, decisions on financial policy, control of expenditure (e.g. on salaries), control of income (e.g. review of fees, policy on payment by instalments); these are properly the work of the director, or board of management, or ministry department, with professional advice from the accountant. Narrower work is concerned with accounting processes: staff payments, fees collection, valuation of stocks; purchase of and payment for supplies; this is control of the funds allotted to the organisation according to policy, and the responsibility of the financial specialist in charge.

An autonomous institution will, of course, have to have staff to undertake these tasks. If, however, an institution is part of a larger one, like, for example, a department of a university, there are important decisions to be made. How far can or should the distance-teaching institution control the management of the funds allocated to it? And how far should it be responsible for its own accounting, as opposed to leaving the work to be done by the financial department of the university?

The financial behaviour of a distance-teaching institution is very different from that of a conventional educational estabablishment. There is a large capital outlay as courses are developed, with slow returns. There is a large proportion of part-time staff. And part-time students often prefer to pay fees by instalments. Given differences of these kinds, it is helpful for an institution to have at least its own accounting staff, even if there is little or no financial control over operations in general. This will enable the unit to establish suitable accounting procedures, so that it can get easy access to the kind of information it needs.

## 3. Stores and distribution department

We have never come across an established distance-teaching institution relying heavily on print which was not short of storage space. This makes it difficult to keep all the courses always in stock. A common complaint from students is that study materials arrive late or not at all. So devising means of minimising these problems is crucial to an institution's efficiency. There are unfortunately no solutions which apply everywhere, because what you set up depends on what is available, on the distances to be covered and on the existing communications network.

There are, however, some questions whose answers will help you to determine what storage space you need and how to organise it:

> How many courses are you offering? How many students do you expect on each at any one time?
>
> What is the expected average decrease in numbers at various stages of each course (i.e. how many more copies do you need of volume 1 than of volume 5 or of volume 10)?
>
> How many volumes are there for each course?
>
> How much of each course is to be sent to students at any one time?

What other study materials (kits, tools, textbooks, tapes, slides, charts, etc.) are to accompany any of the course materials?

Are you sending materials direct to students, to regional offices, to study centres or to study groups?

For how long do you expect to use the course before it is revised?

Along with the answers to these questions, six principal constraints must be taken into account:

**the space actually available for storage :** If this is cheap and unlimited (which is unlikely) and if you know roughly how many students to expect during the lifetime of the course, it will be cheaper in the long run to print all the copies you need at once and store them. If, for example, you expect to have 10 000 students for a particular course over five years, during which time the course will not be revised, and if you can afford to pay the printing bill all at once, it will be cheaper to print 10 000 copies in one run and store them. If space is limited or expensive, you may have to reprint the number you require each year. All this is likely to be affected by a decision either to use existing storage accommodation or to design and build a new storeroom;

**the need for access to each set of materials** which goes out as one batch to a student or group;

**the climate and security conditions** and their effect on materials over time;

**the staff available** for stores and distribution;

**the regularity and methods of dispatch**;

**the institution's** budget for printing;

**the amount of paper and other supplies which need to be stored** If you are printing your own materials, you can save money by buying paper in bulk.

These constraints, and the answers to the questions above, need to be weighed against each other in order to reach a compromise between what is ideal and what is available.

As we have just seen, the distribution system affects the storage requirements. And the methods of distribution are determined by what is required, what is available, what works best and what the alternatives cost. Traditionally, correspondence education suggests letters (in some languages the term implies postal tuition, or letter education), and letters usually travel by post. The post remains in most countries the main method of distribution. But in some the postal service, especially to remote rural areas, is too unreliable or too slow. Other methods, such as official transport, commercial delivery systems (such as those used for newspapers, beer, or soft drinks), special courier services or personal delivery by associated personnel are sometimes used. Here are three examples of different kinds of distribution system.

1. When Lagos University launched its nationwide correspondence programme, it carried out a series of tests of the postal service, which suggested that it was not sufficiently reliable. Students, however, were expected to attend study centres regularly for face-to-face tuition. So it was decided to establish a regular courier service to each study centre, to deliver study materials for the students and collect their completed assignments for return to Lagos.

2. In Colombia the ACPO radio school organisation often uses informal networks, such as travelling priests or farmers on their journeys to and from market, to send lessons to groups in remote mountain villages.

3. A proposal for a large-scale teacher education project in Bangladesh suggests posting lessons to education offices in sub-district headquarters, to be collected by head teachers for their staff on their monthly visits to collect teachers' salaries.

Sometimes the postal service is slow but reliable. If so, it may be used to distribute study materials and student work, but the time it takes for assignments to be received, tutored and returned to students must be allowed for in deciding how much work to send to a student at any one time: he must have enough to keep him busy between sending in an assignment and getting it back with the next batch of work.

**EXERCISE D**

(a) List the methods of distributing study materials used by, or planned for, your institution and assess their efficiency. Suggest more efficient alternatives if you think there are any.

Method of distribution

Materials sent that way

Speed (tick as appropriate)

Fast Reasonable Slow

Reliability (tick as appropriate)

Fast Acceptable Slow

Possible alternative

(b) How do these distribution methods affect the storage system you use or plan to use?

**COMMENT**

People often make assumptions about the speed and reliability of postal services, and fail to take alternatives to the postal system seriously. You may like to consider how far you yourself have done this in completing the table above. Do you, or does your institution, have sufficient information to make an objective assessment? If not, you may avoid a lot of future troubles for your distribution department by collecting the information. You could organise a simple test of the postal system, by posting cards to people in a number of different places and asking them to post them back, recording the dates they are posted and delivered back to you, and checking as far as possible the number lost. You could also investigate the goodwill and itinerary of alternative distributors.

## What information is needed and how can it be recorded and made available?

The records department of a distance-teaching institution is its nerve centre. It has two equally important purposes: to collect information and supply it to the departments whose functioning it must regulate.

The following kinds of information need to be recorded.

**information about students**

- enrolment and background;
- payments;
- progress;
- problems and correspondence;
- results;
- drop-out;
- attendance at tutorials, residential courses, or other face-to-face sessions.

**information about tutors**

- recruitment and background;
- allocation of students;
- work-rate and performance;
- times of absence from normal address (e.g. leave, extended business journeys, etc.);
- problems;
- pay.

**information about course materials**

- planning, writing and completion;
- production;
- storage and stocks;
- dispatch;
- evaluation data, including lists of errors.

The most difficult of these record systems to get right is the one about students, because the information is used so often. The same information may be used in different ways. For example, the record of students' marks for assignments may be used both for checking the progress of students and as an indicator for evaluating the lessons of a course. And information about each student may be used by different people. For example, records of payments made will be referred to by dispatch clerks as well as bookkeepers. Information must therefore be recorded so that each person who needs to can get to it without preventing access by colleagues, or getting in their way.

Part of the answer involves establishing a routine procedure for dealing with records; for example, the accounts department may deal with new enrolments first thing each morning, with the dispatch department moving in later in the day. It is also necessary to design an economical, efficient system for keeping records.

CASE STUDIES

Now read Case Study 16, which is a description of the National Extension College records system, and Case Study 17, which is a description of records kept by the Department of Non-Formal Education in Botswana.

You will see from these descriptions that the student enrolment card is the centre of the records system, with other records duplicating certain items of information as necessary.

Records for tutors are simpler, as there will be fewer tutors than students. The number of assignments marked can be recorded in a book, on a card or in a register, which is then used for calculating pay. The student number of each student allocated can be recorded on a card for each tutor. Folders can contain tutors' personal details and correspondence.

For course materials, it is necessary to have folders on each course; there will be several files, containing for example correspondence with writers, data for course revision, or correspondence about accompanying texts or copyright material. Many institutions keep a course production schedule, which records the deadlines set for each stage and the dates when each stage is actually completed. There will also need to be a stock book, keeping records of copies in store.

This description has indicated that a single storage system for records is unsatisfactory. Record books, files and cards are all necessary for different kinds of information, and a code for cross-referencing is essential. Most distance-teaching institutions allocate student numbers and course numbers to facilitate this. Often an alphabetical student register book is kept in which the names of all students and the numbers allocated to them are recorded when they register. This makes possible a quick cross-reference between name and number if either is missed out in correspondence.

Record cards can be stored in drums, in drawers or in trays. As with all filing systems, there is a problem in deciding whether people who need to use the records must come to them, or whether the cards may be removed, taken to another department, and returned after use. The former is obviously safer, but may be inconvenient. The advantage of record drums is that cards can be stored in large numbers and can be taken out and put back easily as the need arises. The opposite advantage applies to visible card index trays: both sides of the card can easily be seen and written on, but they cannot be easily removed.

If you have a computer, then information is necessarily kept in one place. You will be able to store all basic information on the computer, but you will have to consider whether some information should still be duplicated on manual records. For example, the student's course card described above might still be needed in a computerised system. Unless you have a very large student body, a computerised record system is unnecessary. A manual system can handle several thousand students with ease. We make no attempt here to offer advice on computerised record systems. If your institution is large enough to justify it you must seek specialist technical advice.

A major problem emerged in the Botswana correspondence programme in connection with the decentralised provision of student services. It is a problem common to many third world countries. How should information about students' progress be made available to district adult education officers stationed hundreds of miles from the central records office, and what information do they need to be able to provide personal student tutoring and counselling services? One proposal was that the whole records system should be decentralised to district offices, another that duplicate systems be kept, one in the centre, one in the districts. The compromise now being operated is that on enrolment student names and numbers are entered on district as well as central lists and that their progress on individual courses is similarly recorded. Each month a list of new enrolments and of student progress for each district is sent to the district adult education officer who can then pass that information on to the tutors who are providing face-to-face services in that district.

If your institution is a department of another, such as a university, you will also have to consider how far your records should mesh with the regular university records, and how far you need your own separate records.

EXERCISE E

You will see below the list given at the beginning of this section. In the first blank column, indicate the method your institution uses to record each kind of information. In the second, indicate who uses it.

| Information | How stored? | Who uses? |
|---|---|---|
| about students | | |
| enrolment and background | | |
| payments | | |
| progress | | |
| problems and correspondence | | |
| results | | |
| drop-out | | |
| attendance at tutorials, residential courses, etc. | | |
| about tutors | | |
| recruitment and background | | |
| allocation of students | | |
| work-rate and performance | | |
| times of absence from home | | |
| problems | | |
| pay | | |

| | | |
|---|---|---|
| about courses | | |
| planning, writing and completion | | |
| production | | |
| storage and stocks | | |
| dispatch | | |
| evaluation data | | |

What problems occur, or do you foresee, in this system? How could you reduce them? Identify two or three problems, and make suggestions for improvements in the space below.

COMMENT

The NEC system (Case Study 16) has two major shortcomings that you may have spotted. While the drum filing of record cards gives easy day-to-day access to information, it is difficult to extract information about overall student progress or about the completion rate on particular courses. It is also very difficult to keep track of individual students' progress without slow manual checks, or to relate individual students to particular courses. There are three ways of lessening this problem. One is to use both student master record cards (as at NEC) and individual subject course cards which are filed by subject and on which each student's progress in that subject is recorded. Cards that are punched for sorting can also make such evaluation easier, but they then have to be carefully re-sorted so that they are in order. Or if it is feasible to introduce computerised records (as NEC has done), such information can be obtained automatically.

CASE STUDIES

To summarise this section on departmental structure we suggest you read Case Studies 18, 19 and 20. Each contains a brief summary of an institution's activities and teaching methods, and an organisation chart which shows how the departments relate to each other.

What kind of staff do we need?

We have seen in the preceding units that different projects use different kinds of staff to write and produce their materials and their programmes and to tutor and support their students. There seem to be two main factors which determine how departments are staffed.

**Part-time and full-time staff**

We have considered part-time and full-time writers, script writers, tutors and counsellors. The choice seems to depend on the numbers of students, the number and length of courses, the finance and staff available to the institution and the extent to which other institutions can perform certain tasks for it. The advantages of using part-time staff are economy and access to existing expertise. Both are vitally important in most third world countries. The disadvantages are lack of control over scheduling, speed and quality. Most institutions arrive at some form of compromise between them.

**Academic, technical and administrative personnel**

A balance must also be struck between those responsible for the content and pedagogics of what is taught (the academic staff), those who design and produce the materials (the technical staff), and those who organise and administer the system (the administrative staff). All three are necessary. The central role of the technical staff, however, makes a distance-teaching institution different from an ordinary school or college. And, as we saw earlier, the fact that distant students are usually studying part-time and at a distance from their teachers most of the time makes the organisers and administrators more obviously important. At the same time distance teaching often merits the criticism that it is second-(or even third-)rate education. The successful institution is one which manages to harness the skills of all three categories in a combined effort to provide for the students' educational requirements.

**EXERCISE F**

Fill in the following chart by listing all the staff of your own institution, or of any institution with which you are familiar. Show how they are divided between part-time and full-time and between academic, technical and administrative.

| | Academic | Technical | Administrative |
|---|---|---|---|
| Full-time | | | |
| Part-time | | | |

**COMMENT**

This table gives you a clear record of the staff of your institution. It will help you assess staff training needs, which we discuss in the next section.

## What skills do staff need and how can they be trained?

We shall look at skills and training according to the categories of staff defined in the previous section.

### Planners and administrators

The determining characteristic of distance teaching is that for most of the time teachers and learners are at a distance from each other. Learning does not usually take place in institutions. It is, first and foremost, a way of making learning opportunities available to potential students over that distance. The system's efficient operation is therefore of prime importance. Without it the teachers, however impressive, and the students, however motivated, cannot establish a dialogue. The constitutions of distance-teaching institutions and their relationships with other bodies are usually determined before staff are recruited or work starts. Educational planners and individual innovators usually make such initial decisions, often with the advice of 'visiting experts' and usually in consultation with traditional educators. It is of immense value if the planners can be trained in distance-teaching techniques and systems while they are drawing up institutional plans. The implementation of the system is, of course, in the hands of the senior staff appointed to establish and administer the institution. These may include some of the people who planned it; they have usually had little or no experience of multi-media distance teaching.

Training requirements are much the same for planners and senior administrators. They need to know about possible methods and combinations of methods, their advantages and disadvantages, their potential and constraints and their administrative requirements. This is probably best ensured by the study of existing systems. They need to be studied, moreover, in the light of adult learning psychology and, in particular, of the characteristics of distant students. While administrators do not necesarily need to master the various production skills which their institution uses, an appreciation of the problems and the requirements of the various media is an asset in managing their staff and resources. This is possible only by learning, at least in rudimentary fashion, to carry out the production processes. In addition senior administrative staff must have a wide-ranging knowledge of educational planning and of the role of distance teaching in it, including the economic and social as well as pedagogical considerations.

Nearly all senior staff are full-time. They need to be trained to a high level and dialogue with counterparts with different backgrounds can make an important contribution. In many cases their career prospects demand postgraduate qualifications. It may be possible for such people to be released for long enough to complete postgraduate degree courses; for others training opportunities mut be provided in shorter periods.

### Writers and editors

In most distance-teaching systems printed materials carry the heaviest teaching load. Even in programmes aimed at predominantly illiterate groups, printed materials are often the basis for sustained and systematic learning, which takes place either in contact sessions with tutors or in study groups, working with a monitor or literate group leader. The design and writing of these materials are therefore very important. Sometimes they are written by part-time subject specialists, sometimes by full-time writers and sometimes by teams of both. Responsibility for co-ordinating the writing and preparing it for printing usually lies with full-time editors.

Writing for distance education requires three main qualities: subject expertise, teaching ability and writing skills. The first of these is a prerequisite for selection as a writer. Training for writers must be designed to develop the other two, with particular reference to correspondence and self-study courses. It must be kept practical and must respond to individual needs; these will usually relate to specific courses. It must also be arranged so that part-time writers can participate.

Editors need to have a wider understanding of the techniques and implications of distance teaching. They cannot possibly be experts in all the subjects they have to deal with, but they must be familiar with different approaches to presentation and writing styles. They must also be able to ensure that written materials are closely integrated with other media, and they therefore need a basic understanding of those other media. In many places editors are responsible for printing and production. They need to know about technical aspects of graphics and printing, and how the production processes can best be fitted into the administrative structure.

**Media producers**

Distance teaching uses both print and broadcasting to teach students. It therefore needs printing and broadcasting specialists trained in the skills of their trade. Graphic artists, printers, cameramen, sound recordists and radio or television producers must be trained to the same standards as their colleagues in printing and broadcasting organisations. In addition they need, if possible, some background in the educational use of their media. These specialists may or may not be full-time staff of the distance-teaching organisation. This affects the type of training possible. Initially, however, they should be trained as broadcasters or printers; only those responsible for combining what they produce with other media need to have a wider understanding of distance-teaching systems.

**Tutors, counsellors and group leaders**

The mass media on which distance teaching relies are, with some justice, criticised by traditional educators as impersonal purveyors of prescriptive rote learning. Correspondence education has not been wholly successful in overcoming this, by emphasising two-way contact between students and their postal tutors. With the development of multi-media approaches, face-to-face contact between students and tutors or counsellors has become a regular feature of distance-teaching systems. In some, group study of print and/or broadcast materials is organised and led by monitors or group leaders. These are usually trained to lead discussion and to run groups, but are not teachers or subject experts. The purpose of all these personal interventions is to give students help, guidance, encouragement and support. In almost all cases tutors and monitors are part-time. They are not likely to be familiar with the principles or the systems of distance teaching or with the problems of isolated adult part-time students. Their initial idea of their role, based on their own educational experience, is likely to be that of the traditional teacher, an authority figure and a dispenser of knowledge. They must be taught to develop new kinds of educational relationships with their students or with the groups for which they are responsible.

Their training has to have three components. First, they need to understand the administrative procedures through which they act as links between students and the institution - methods of contact and records. Second, they need to be helped, at the beginning and through continuing support, to develop leadership and counselling techniques to create supportive relationships with their students. Third, they need to be equipped with information, references and contacts to help the students to seek further advice, more advanced knowledge, or solutions to individual problems which they themselves cannot provide. The first and last of these can be provided largely by printed handbooks and reference manuals. The second probably requires short induction training, preferably residential, and continuing support from the institution. It is worth noting that tutors and group leaders suffer, like their students, from isolation from the institution and from their colleagues. Opportunities to meet each other, to meet full-time staff, to exchange experiences, and to develop a sense of belonging to the institution can play a vital part in their training.

## Staff training strategies

Many of the duties and skills of distance-teaching staff are the same as those needed in other kinds of organisation. Distance teachers need to be as good as face-to-face teachers: their accounts officers need to be good bookkeepers; and their evaluation officers, good social scientists. Distance-teaching staff, therefore, need just as regular in-service and up-grading courses in such pedagogical, academic, technical or administrative skills as those in any other institution. They must be able to hold their own in their particular specialisms. But they also need training specific to distance teaching, if possible. Many kinds of training are now available. Much is undertaken on-the-job, either by learning from senior colleagues, or by visits of experienced staff from similar institutions. There are also a growing number of books and training manuals on techniques of teaching and administration for distance education which can be used alongside on-the-job training. Regional, continental and international associations of distance teachers have begun to develop in recent years, and some of them run short intensive training workshops. International aid agencies are also prepared to sponsor study visits to other institutions whose work is relevant. Finally there are a few places where longer term training in distance-teaching skills is available, sometimes leading to higher degrees. These training opportunities must be regarded both as a way of providing the institution with the skills it requires and as a way of satisfying individual career ambitions. A satisfactory training policy is a compromise between these two pressures.

**EXERCISE G**

Refer back to the lists you drew up in Exercise F. Now draw up a skills and training chart for them.

(a) **Full-time**

| Job/post | Main skills needed | Training to be provided | How? |
|---|---|---|---|
| Academic | | | |
| Technical | | | |
| Administrative | | | |

(b) **Part-time**

| Job/post | Main skills needed | Training to be provided | How? |
|---|---|---|---|
| Academic | | | |
| Technical | | | |
| Administrative | | | |

**COMMENT**

The training opportunities available to your staff will obviously vary. Three important points must be remembered, however. There is no point in prescribing training which cannot be made available to the staff concerned: an advanced course in group dynamics might be relevant to group leaders, but if there are many of them, and they work part-time, it is probably wholly unrealistic to suggest anything other than short introductory and practical courses on leadership techniques. Secondly the courses must be relevant to the skills required, but, thirdly, training opportunities for full-time staff must be seen in terms of career prospects as well as immediate skill requirements.

## How can you encourage good staff relations?

The comments on Exercise G have led us into questions of staff relations. These are in no way specific to distance-teaching institutions, but nevertheless need to be stressed. Perhaps most important for the success of any institution is the maintenance of good relations among staff and a sense of purpose and commitment. For this it is vital to provide training opportunities and to link promotional prospects and career structures to them for staff at all levels. Almost all workers want the possibility of promotion and better pay. This is no more or less important in distance teaching than in any other occupation. Catering for these ambitions in a distance-teaching organisation, however, encounters some complications. These arise mainly from the fact that in most countries distance teaching is a new occupation, and does not compare easily with the skills, qualifications and hierarchies of traditional educational establishments.

First, most staff need skills and experience which elsewhere would be possessed by different categories of workers: the academic must be able to write well and understand (and often practise) the rudiments of broadcasting; the administrator must often serve as a counsellor and be sensitive to the educational implications of administrative decisions. This calls for interdepartmental experience and flexibility in work responsibilities, which are also called for to enable staff to switch temporarily from one department to another in response to changes in the workload.

Also, there is often no obvious traditional model for comparing and relating status and salary scales. For example, a printer who is running several small machines and supervising a highly specialised distance-teaching output often does not have the status his responsibility demands, because in traditional, much larger, printing concerns his equivalent would be in charge of more staff and more machines. Again, an editor or radio producer in a university distance-teaching institution needs a status which gives him authority over writers who are lecturers, or even professors. Purely academic qualifications do not equip him for his job, but without them he is not granted equivalent academic status. Establishing comparability between academic, professional and technical staff is crucial in preventing tension between them in course teams. Equivalence must also be established with the staff of other educational institutions and the civil service, in order to gain recognition for the institution and for its courses and recruit the best possible staff.

Finally, staff in distance-teaching institutions are often on temporary secondment from their parent bodies, or are part-time. The work they do for the institution must, if possible, be recognised, for promotion purposes, by their full-time or permanent employers; at the very least, it must not cause friction between them. The choice of titles for posts can sometimes help to indicate appropriate status.

It is also important to develop a sense of involvement in the decisions, the policy and therefore the successes and failures of the institution, and channels of communication for problems and grievances.

Good personnel management, the minimising of tensions between different departments and staff, is as crucial to a distance-teaching institution as to any other. The methods of personnel management developed in industry and the public services apply as much to distance teaching as to other forms of education and management: regular but purposeful staff meetings; a regular flow of clear information from one department to another and from one level of staff to another; the establishment of trade unions, consultative committees and channels through which grievances can be expressed and dealt with. All these are particularly important because functions and departments in a distance-teaching unit are unusually interdependent for an educational establishment. It is impossible to generalise about the appropriate structures for personnel management and consultation.

CASE STUDY

One apparently successful example, the staff relations committee of the Lesotho Distance Teaching Centre, is included as Case Study 21.

## What have we learned?

This unit started with a set of questions about the internal organisation of a distance-teaching institution. By way of summary, here are the same questions differently expressed. The exercises you have done in the unit have led you to consider each.

What are the main functions of your administration?

What departments do you need?

What kinds of staff do you need?
(academic; technical; administrative; full-time; part-time)

What skills do staff need?

What specialist training do they need?

What procedures can you adopt for staff relations?

In order to pull together the themes considered in the unit, we suggest you do one or both of the exercises in Assignment 6.

## ASSIGNMENT 6

1. In Exercise B, you listed the departments in your institution and their functions. A distance-teaching institution often has to make changes to its organisation. The student body will grow or contract. Departments will merge or separate, and responsibilities will shift between them as work changes. Look back at what you wrote for Exercise B and consider the following questions:

   Are any departments overloaded?

   Are there any unclear divisions of responsibility?

   Does each department have easy access to the information it needs?

   Are there any bottlenecks in action due to organisational problems?

   Are there too many or too few departments?

   Identify three problems and make detailed proposals for improvement. Then draw an organisation chart of your institution which takes account of these proposals. Specify the number of departments, their functions, the numbers of staff in each and their status. Use the organisation charts in Case Studies 18 to 20 to help you, especially if you are drawing up plans for a new institution.

   Your suggestions will, no doubt, be determined by your own position in your organisation. It would be interesting to discuss your ideas with people from different departments.

2. In the next two units we will refer from time to time to the People's Education Centre (PEC), which is an institution established for the purposes of this manual in a democratic third world country of moderate prosperity (GNP per head 1979 US$480). PEC reports to its ministry of education but has some freedom to develop its own policy. It has the following activities:

   it enrols 10 000 students a year on correspondence courses, most of which lead to secondary-level qualifications, or are in vocational subjects at post-primary level; students pay fees for these courses;

   it prints about 45 000 volumes a year for the students;

   it runs a nonformal rural education project;

   it produces radio programmes (seven series a year);

   it does some research and evaluation of its work.

   PEC employs some subject specialists, to write and mark correspondence courses, but also uses outside writers. It employs on its own staff people responsible for writing, printing and editing courses, advising students, producing radio programmes, carrying out research and evaluation, controlling finance, running the rural education project, developing new educational proposals, and maintaining and driving vehicles. The staff have made a crude estimate that the energies of the Centre are divided in the following proportions between activities:

| | |
|---|---|
| course production | 35% |
| student services | 35% |
| radio | 10% |
| research | 5% |
| rural project | 15% |

but some of them argue that the rural project is more important than this estimate suggests.

Draw up an organisation chart showing the departmental organisation which you think would best suit PEC, and giving the functions of each department.

# Unit 7: Relations with other organisations

This unit looks at how distance-teaching institutions relate to other organisations and at the administrative implications of such relations. We shall consider the following questions:

What is the constitutional status of your institution?

What are the advantages or disadvantages of different constitutional relationships?

What are the implications of sharing resources or having independent resources?

How can a distance-teaching institution service the needs of other agencies?

What arrangements should be made for joint projects?

What sort of relations do you need with outsiders?

A distance-teaching institution is never totally independent of other organisations. This unit suggests how you can build up good relations with others so that you can make the best use of the resources available. At the end of the unit you will be able to:

1. explain why distance-teaching institutions need to co-operate with others;

2. describe the advantages and disadvantages of different kinds of co-operation;

3. discuss how to organise such co-operative arrangements;

and, for your own institution, you will be able to:

4. analyse critically the formal and informal relationships your own institution maintains with other organisations;

5. draw up plans for creating or improving relations between your own institution and other organisations with which it must co-operate.

## What is the constitutional status of your institution?

We looked in Unit 1 at some of the reasons why governments have created distance-teaching institutions. The reasons vary: sometimes a government wants to expand a particular form of education quickly for a group of people, like teachers, who cannot be taken from their jobs to be trained; sometimes demand for a particular level of education far outstrips the places available or the government's ability to expand the number of places in appropriate institutions; sometimes a government wants to harness the media of distance teaching to a whole range of educational objectives, formal and non-formal, to expand and improve existing provision and to facilitate innovation.

Most programmes probably fit into the first or second of these categories, at least when they are first established. They are seen as extra secondary schools or teacher-training colleges, working mainly or entirely for external or part-time students, using different methods and as a result catering for a much larger student body. Or, in nonformal education, they are created to give existing extension agencies, as in agriculture, health or co-operative education, the ability to reach out more cheaply to a wider audience. In most such cases their relationships are almost entirely with the ministry or agencies already concerned with that kind or level of education: they are part of the teacher training department of the ministry of education, or of the secondary or adult education department of the same ministry, or a section of the extension department of the ministry of agriculture or health. As a result it is likely that they will have fairly easy access to the facilities of that ministry or department, but no contact with those of other ministries.

In a few cases, however, as in Mauritius or Lesotho, the distance-teaching institution has been established with a more general brief. MCA and LDTC were set up to use distance-teaching methods for both formal and nonformal education purposes. While they were closely related to their ministries of education, they had to establish links with other bodies, from the beginning, in order to develop programmes of, for example, health education or family planning. They were, therefore, the innovative arms of their own ministries, but from the beginning had a brief to try to offer services to or run programmes with other ministries.

As we have seen in the last two units, distance-teaching institutions can never operate wholly independently of other organisations. At the very least, if they are to realise the benefits which justify using distance teaching at all, they need to draw on the resources of existing agencies working in the same kind of education. A teacher-training programme, for example, must use teachers' colleges, teachers' centres or institutes of education to support its services to its students; it will employ their specialised staff to write its courses and tutor its students. At the other extreme a general-purpose institution needs to work with a range of other bodies and must develop relations which are mutually beneficial, and through which duplication and competition can be avoided, and content and delivery method improved.

In many cases, the reasons which lead the authorities to turn to distance teaching also determine the shape and size of the institution they establish, as well as its status and relationships with other institutions. The first decision is how and where it should be set up. Should it be a government department, and, if so, part of which ministry? Or will it be more effective as a unit or department of an existing institution, such as a university, a college of education, a college of agriculture or a curriculum development centre? Or perhaps it needs to be a new and separate institution, either with parastatal status or entirely autonomous? Its purpose and sponsorship, and the size and complexity of its proposed operation, determine the answer, together with a critical assessment of existing agencies and their willingness and capacity to take on a new programme. The final decision on a constitutional status for each new institution can be made only in the light of the particular circumstances in which it is to operate. There is no simple rule of thumb to guide the planners.

We think, however, that the following principles, which are derived largely from the considerations we have referred to in previous units, should figure prominently in discussion about what constitutional status a new distance-teaching institution should have or what constitutional improvements can be made to the position of an existing body.

There are economies to be achieved by using existing facilities wherever possible and by avoiding duplication of staff, equipment and buildings.

On the other hand, an institution which is self-sufficient can exercise greater control over the quality and utility of its activities.

There are usually other institutions involved in similar activities, though possibly by other methods, and in most situations there are advantages to both sides if the distance-teaching institution and the others work together.

On the other hand, there is a danger of competition between such institutions, and fears that the distance-teaching agency wishes to poach staff, students or activities from those who have been established for a longer time.

Co-operative relationships, therefore, must be based on a recognition by both sides of the need for each other's services and that both organisations have staff and facilities through which such needs can be met; they also demand clear definitions of the roles and responsibilities of each.

Finally, the ability to see the need for and the opportunity of co-operative relationships depends on a continual awareness of what related agencies, at home and abroad, are doing.

## EXERCISE A

This exercise is about your own institution. If an institution has not yet been established, describe the proposed institution and the organisational links you think will be desirable.

(a) List as many reasons as you can why the institution was set up.

(b) Is it a government department or part of another institution? Is it autonomous or parastatal?

(c) List all other organisations to which it is related, and the nature of the link.

| organisation | nature of link |
|---|---|

COMMENT

This exercise should give you a framework for thinking about issues raised in the remainder of the unit. You may wish to return to it later and add further names to your list of organisations. First, however, we shall look more closely at the question of constitutional status.

## What are the advantages or disadvantages of different constitutional relationships?

In the previous section, four types of status were suggested: a ministry department; a unit or department of an existing institution; a parastatal body; or an autonomous institution. The following chart attempts to highlight some of the main advantages and disadvantages of each of the four possibilities. Detailed discussion of these issues should take place amongst those concerned before an institution is established. The choice made is likely to have long-term effects on the efficiency and achievements of the institution.

### Comparative advantages and disadvantages of different constitutional statuses

| | | Possible advantages | Possible disadvantages |
|---|---|---|---|
| 1. | Ministry department<br>e.g. Botswana Department of Non-Formal Education (formerly Botswana Extension College) | Direct government control. Complete integration in national education plans. Direct access to government funds and resources. Structure for access to other branches of government. Integrated salary and career structure within civil service for institution's staff, should avoid duplication. Government commitment. Political support. | Bureaucratic control/ lack of administrative independence. Difficulties in getting agreement for innovation. Problems establishing and maintaining specialist requirements. Restricted objectives and lack of freedom to experiment. Tied to civil service career, qualification and salary structures which are not always suitable for new posts. Editorial guidance. |
| 2. | Unit/department of existing institution<br>e.g. Correspondence and Open Studies Unit, University of Lagos, Nigeria | Access to larger institution's resources, services and network of contacts. Can capitalise on its authority and reputation. Support and commitment of established parent institution. | No direct access to educational policy makers. Often in competition for resources with unrelated and uncomprehending parallel departments. In competition with traditional colleges or schools. |

| | | | |
|---|---|---|---|
| 3. | **Parastatal body**<br>e.g. Mauritius College of the Air (now part of the Mauritius Educational Broadcasting Authority) | Direct government involvement and ultimate control. Therefore direct government commitment. Opportunity for independent initiatives. | Difficulty of establishing own authority and reputation. |
| 4. | **Autonomous (non-profit) organisation**<br>e.g. National Extension College, UK | Opportunities for independent initiatives and experimentation. Freedom from bureaucratic and political control. | Difficulty and slowness in establishing authority. Difficulty raising funds. Lack of political commitment from government, state educationalists, etc. Possible ideological conflict with establishment. |

## CASE STUDIES

Now read Case Studies 22-25. You may read all four, or you may select the case study whose constitutional status is closest to that of your own institution and read only that one.

## EXERCISE 8

Choose one of the case studies and, using the information given, list the benefits and problems that seem to have resulted from its constitutional status.

Institution ..............................

Status ....................................

| Advantages | Disadvantages |
|---|---|
| | |

COMMENT

Distance teaching is still a comparatively new form of education. It makes use of many different skills, some of which are not traditionally associated with education. Moreover an important characteristic is the part-time nature of many of its activities and of the people and facilities associated with them - students, staff, buildings, equipment. This on the one hand means that it does not use people, time, buildings or money in the same ways as traditional educational bodies. Therefore the establishment and working patterns of the latter are not always appropriate for a distance-teaching agency. This, together with the fact that innovation usually requires independent initiatives, is an argument for an autonomous or semi-autonomous agency. Autonomy also makes links with a wide range of ministries and agencies easier to create - and in this way the potential of distance teaching can be made available to many different kinds of education and extension. On the other hand the part-time nature of its work, together with its potential for economy, makes it dependent on other agencies for facilities and for support. Such support is more likely to be forthcoming from organisations which are related to it - e.g. under the same ministry - or which are integrally part of the same body - as in a university. Finally, most education in many developing countries is the business of government. Independent or even semi-independent agencies are in danger of remaining outside the mainstream of educational expansion.

## What are the implications of sharing resources or having independent resources?

Another important set of considerations helps to determine the shape and size of a distance-teaching institution. They were referred to in the last section and they overlap with, and are often almost indistinguishable from, the constitutional questions raised there. What resources are available to the new institution? To what extent can and should it set up its own capacity to carry out all the functions which distance teaching requires - writing, printing, broadcasting, tutoring, face-to-face teaching? Or how far can it and should it rely on other institutions and part-time personnel to provide those services for it? We studied these considerations in Units 3, 4 and 5, in relation to the production of printed and broadcast materials and the provision of face-to-face services. The following paragraphs remind us of their implications.

### Broadcasting

It is seldom justifiable to establish separate transmitters just to broadcast distance-teaching programmes. Even the radiophonic schools of Latin America, which usually have their own radio stations, use their transmitters for general broadcasting most of the time (and, incidentally, use the income from that to finance purely educational broadcasts). Studio and recording facilities may be a different matter, depending on the costs, what exists already and whether there is spare capacity, and the amount of broadcasting the new institution intends to do. Similarly the need for separate producers and scriptwriters and the decision whether they should be full-time members of the institution's staff must depend on the work to be done. Whatever the decisions, it is important that good relations are achieved with broadcasting bodies from the outset. Negotiations should cover such topics as the amount of time on the air, the specific times when the programmes can be broadcast, how long a programme schedule lasts, and the mechanism and frequency for negotiating it. Other questions that need early agreement are: who is responsible for scripting, voicing and production of programmes? Do you have regular access to a studio, or should you develop your own? Where are new and old programmes to be stored? Time spent in satisfactorily resolving these issues is well spent. Never accept a temporary and haphazard arrangement if you can avoid it. Many institutions which decide to support their programmes with broadcasts will want at the very least to employ, as a full-time and permanent member of staff, a trained and specialist broadcaster to liaise with broadcasting agencies and to supervise programmes and broadcasting arrangements.

### Course writing

Another example is the employment of subject specialists to write courses for distribution in printed form. The Open University in Britain employs a full academic faculty for this purpose, but university teachers are not in short supply in UK and the OU is teaching nearly 50 000 students at a time, so there are economies of scale. In most African countries it would be impossible to launch a university degree programme if a complete full-time academic faculty was needed to write the courses: most existing universities have difficulty recruiting enough qualified staff, especially in science and technical subjects. Moreover the numbers of students the programmes are likely to recruit are too small to justify such expenditure. An alternative, therefore, is to employ existing university staff to write courses on a part-time basis, with full-time specialists supervising the design, writing and use of a range of subject-courses.

### Face-to-face services

Face-to-face services raise many of the same questions. What existing facilities can be used by distance learners on a part-time basis, what local (i.e. local to the students, not the institution) personnel can provide occasional face-to-face tutorials and what premises and equipment do they need? In most situations there are buildings and equipment in existing institutions which it would be wasteful to duplicate for part-time and occasional use by distance learners. Such institutions also have personnel who can provide occasional help and support. But arrangements are needed for special book collections, experiment kits, book borrowing and science or technical practicals. And all these activities and facilities have to be supervised and co-ordinated.

The main advantage of having facilities and staff available full-time is the greater control over scheduling, distribution and standards it allows. The disadvantages are mainly economic. Most distance-teaching bodies have to arrive at a series of compromises between the two extremes in the light of what exists and what they can afford. These compromises between full administrative and production control and the co-ordination of outside resources affect the administrative system of the institution at all stages. The constitutional relationships with other bodies on which the institution is going to rely for the provision of services must be designed to ensure co-operation and sharing of resources. The administrator needs to be aware how far existing constitutional arrangements allow an institution to develop links with others and must ensure that opportunities are fully used. It follows that it is important that there is flexibility and that relationships are kept constantly under review.

## EXERCISE C

Look again at the list you made in Part (c) of Exercise A of this unit. Have you included all the agencies on which your institution depends for the production and provision of its materials and services? Make any additions you need to this list now.

When you have done this, consider the agreements that have been made, or that you propose, with each organisation. How could they be improved, if at all? List below some steps you would make to improve relations with one or more organisations. You should make at least three points, but you may list more if you like.

| Organisation | Relationship | Problems that have arisen/might arise | Suggestions for improvement |
|---|---|---|---|
| | | | |

## COMMENT

From all these examples, and from your work on the exercise, you will have seen that there are a number of institutions, such as schools, colleges, university adult education departments and ministry extension departments, with which you come into contact in your work. You are likely to need part-time staff to work as course writers, tutors, supervisors of practical work, centre supervisors, counsellors and group leaders. You will probably need part-time consultants who will, for example, act as academic advisers on the quality of your course material. You need access to the right staff in institutions with which you have formal links. Before you move on to the next section, look again at the suggestions you have made for improving relations with other bodies. If you had to implement these changes yourself, how would you set about it?

## How can a distance-teaching institution build up good relations with its partners?

Any new institution must pay attention to establishing its credibility. A distance-teaching institution must also overcome a barrier of incomprehension and sometimes suspicion. Such a barrier may persist for many years, so long as distance teaching is still considered unconventional by members of the establishment in ministries of education and other ministries concerned with nonformal education and training. A distance-teaching institution, particularly a new one, may have a hard job to get support from those with whom it must work closely.

Suppose, for example, your institution has a formal agreement enabling you to use the staff and resources of other institutions. It is prudent to work closely with the heads of such institutions, and to seek their consent and co-operation in everything you do. It is also advisable never to employ people from such institutions without the knowledge of their immediate supervisors.

Institutions are often reluctant to release staff to work for others. One reason is that they fear those staff may neglect their regular work. In such cases, your institution could hold discussions on ways of sharing staff and facilities. You may be able to open their eyes to some benefits of such sharing. Contracts between staff and the distance-teaching institution must be drawn up which spell out clearly what is expected. And letters of agreement must be exchanged between institutions stating exactly what each has undertaken to provide to the other.

You may also find that an institution is reluctant to develop links because it suspects that you are doing the same kind of work, and will poach its students. Discussions could clarify that you are not competing for their audience but approaching the subject using different, but complementary, methods.

In all these cases, it could be useful to establish regular meetings to compare notes and to explore ways of sharing resources. Possibly a standing committee should be set up, consisting of representatives of all the agencies concerned. You can demonstrate your goodwill by making any of your materials available to friendly agencies, if they think they can put them to good use. You should also give full credit for assistance, and the use of other bodies' personnel, materials and expertise whenever such credit is due.

In order to establish new links, and maintain existing ones, it is advisable to publicise your work. Your institution might prepare special printed materials for this purpose: information leaflets, annual reports, and occasional reports reporting on projects or students' achievements. It might also arrange occasional half-day seminars, to introduce its staff and its work to representatives of other bodies.

### EXERCISE D

Imagine you are organising a half-day seminar to tell related institutions about your institution's work. Draw up plans for the seminar by answering the following questions. Bear in mind that invitees must pay their own travelling expenses, and this constraint may limit your audience to those who live locally. (If, however, your own institution is in a rural area or provincial town, you may choose to hold the seminar in the capital.)

Who would you invite?

What would be included in the programme?

What would you hope to achieve by it?

COMMENT

In planning your seminar, you may have felt that your institution could usefully hold several seminars for different audiences. When you answered the third question, you were probably mainly concerned with improving the services you expect to obtain from other institutions. It may, however, have also occurred to you that such a seminar might reveal ways in which your institution might help others. That is the subject of our next section.

## How can a distance-teaching institution service the needs of other agencies?

The forms of co-operation discussed so far are mainly undertaken to obtain services for the distance-teaching institution's programmes. There are also a range of services which the distance-teaching institution can and should provide for other organisations. Some distance-teaching institutions are in fact set up as service agencies. They offer help in materials design and production, use of media, or the training of field staff for a specific task, such as a radio learning campaign. They can help in feasibility studies or evaluations of media education projects. They may also undertake the development of in-service training for people working for other organisations. Teachers, extension agents, or workers for voluntary education organisations, for example, may ask for this sort of in-service training. Such an activity cannot be developed independently. It needs the active co-operation of employers. They must be involved at all stages: planning, materials design and implementation. For example, no in-service training of teachers could be successful without involving the ministry of education and teacher training colleges.

Similarly, consultancy activities can only be undertaken at the request of other agencies. Any work undertaken on behalf of a department or ministry must be seen to achieve a tangible improvement in that department's activities. Therefore tasks should only be taken on for other bodies if your agency has the staff and resources to do them properly. It is usually wrong to take on a job you cannot do well, simply to obtain a foothold in a new field of activity. Failure at the initial stage may hamper future collaboration. On the other hand, a carefully planned pilot project, even if not fully successful because of lack of support or resources, may lead to a recognition of the potential of distance teaching and to big and better programmes in the future.

Attempts to provide services for other agencies in these ways can lead to accusations of interfering with the work of other ministries and institutions. Distance-teaching institutions must clarify the kind of working relationship they want to cultivate with the other teaching institutions to which they offer their services. Detailed agreements, approval from all concerned, and continuous liaison are steps that can be taken to avoid such pitfalls.

CASE STUDY

One example of a service agency department which developed almost by accident but is now a central part of a distance-teaching institution is to be found in the Lesotho Distance Teaching Centre. Read Case Study 26 for a description of how it works.

EXERCISE E

If your own institution undertakes or will undertake service agency work, compare the way it organises this with that of the Lesotho Distance Teaching Centre. What ideas has the case study given you? List the main points you would make in improving or establishing your own service agency work.

COMMENT

The best comment on this exercise would be from a member of an organisation with which you have worked closely. If you can, arrange an honest post-mortem discussion on the work you did together. What worked smoothly? What went wrong? Is your colleague's perception different from your own?

What arrangements should be made for joint projects between several agencies?

In some countries educational projects, often over a limited period, are undertaken as part of a nationwide campaign. Usually such campaigns can benefit from the techniques of distance teaching. In Sweden these played a role when the switch was made from driving on the left to driving on the right; in Malaysia they are being used to introduce metrication; and in Lesotho they were used in a 'Don't drink and drive' campaign. In such cases the distance-teaching institution is one of a consortium of institutions co-operating on an equal basis. All have specific expertise to offer. All have to make arrangements to participate for the time required without endangering the success of their long-term programmes and commitments. Administrative arrangements must be made, both co-operatively, to ensure co-ordination, and internally, to ensure that each institution contributes what it is best equipped to offer with the least disturbance to its own programmes. This requires a careful definition of the roles each institution must play and clear agreements about their responsibilities and relationships. The arrangements inevitably vary from country to country and from project to project.

CASE STUDY

For a detailed description of what happened in one country, Botswana, you should read Case Study 27 about the planning of radio learning group campaigns in Botswana.

## EXERCISE F

In the table below, fill in details of a co-operative project in which your institution has collaborated, or might collaborate. In the first column, list all the organisations involved, including your own. Then indicate with a tick in subsequent columns those institutions responsible for each activity. In some columns there will be several ticks, where responsibility is shared.

Project title : .............................

Media used : ................................

| Institutions involved | planning | coordination | production | distribution | field administration, supervision | evaluation |
|---|---|---|---|---|---|---|
| | | | | | | |

Now describe any problems that arose, or that you foresee, arising from the complex sharing of responsibility. Indicate how you might overcome these problems.

## COMMENT

As with Exercise E, the best comment would come from discussion with a colleague from another organisation involved in the same project. It is most likely, as we said, that problems arise over definition of responsibility, over the amount of time which each institution must devote to it, and the disturbances caused to regular programmes.

## What sort of relations are needed with outsiders?

The last two sections have suggested possibilities for collaboration with others that go far beyond the bare necessities of co-operation discussed on pages 120-121. Distance-teaching institutions are usually innovative in their methods. An institution will find it hard to experiment if it remains isolated. It is therefore necessary to ensure that each institution is in touch with the mainstream of ideas and action in education. The institution must be up-to-date, and known to be so.

One way to make this easier is to have a consultative committee which meets regularly to comment on policy and choice of priorities. Most institutions have such a committee, which may take the form of a board of governors or advisory council. As far as possible, members should be senior officials from a range of interested agencies, potential consumers and supporters. The committee will give credibility to the institution's activities, ratify policy and offer ideas. The nature and make-up of such a committee will depend on the constitutional status of your institution. If such a committee is to be effective, it must be used well. This means that the director of the institution should consult heads of department about policy issues before each meeting, and that important decisions should subsequently be explained to staff. It may be possible to appoint a staff representative to attend the meetings, ask questions on behalf of the staff, and give an account of the meeting to interested staff afterwards.

Another way to broaden the outlook of your institution and ensure that it is involved in the wider scene is to establish contact with and to participate actively in national and international organisations. These may be able to provide you with regular information on such things as successful projects, curriculum innovation or research results, and some may be able to assist with training or arrangements for exchange visits. The list below suggests some possibilities.

1. **National level**

   statutory bodies, such as Board of Adult Education or a Rural Extension Co-ordinating Committee

   national associations, such as an Adult Education Council Association

   voluntary professional bodies, such as an association of teachers of a particular subject, curriculum committees and so on

2. **Regional level**

   regional associations of distance educators, such as the Distance Learning Association of southern Africa

   regional associations of adult educators, such as the African Adult Education Association

   regional offices of international bodies, such as Unesco or Unicef

3. **International level**

   international organisations concerned with distance education, such as the International Extension College and the International Council for Correspondence Education international associations concerned with adult education, such as the International Council for Adult Education

EXERCISE G

List three ways in which your institution and its staff could benefit from the assistance of outsiders. In each case state the steps you would take to arrange such assistance.

| Kind of help | How? |
|---|---|
| | |

COMMENT

As a comment on this exercise, you might like to think how far the help you have requested is already being provided but not used. Does your institution receive any journals which are not circulated to relevant staff members? Are staff allowed to take time off to attend the meetings of relevant professional associations? Are ideas and decisions on policy filed away without discussion? Can you think of any ways to improve communication and participation in your office, so that the best use is made of help from outside?

## What have we learned?

Here are the main points this unit should have led you to consider:

What are the problems your institution has arising from the nature of its relationships with others?

What are the advantages?

What can you or your institution do to improve and make best use of links with others?

What do you need to do within your institution to alleviate problems and improve relationships with others?

What other relationships ought to be developed?

How can you do this?

The following assignments are intended to help you draw together the work you have done for the unit. You can do one or both. The second exercise is particularly suitable for use in a group.

ASSIGNMENT 7

1. During the unit you have completed a number of exercises which have asked you to assess the kind of links your institution has with others. Go back through the unit and consider the suggestions for improvements you have made. Can you now make a list of further suggestions? When you are satisfied, decide how you or your institution could attempt to develop relations with others, and write down your ideas. As you do this, consider how far responsibility for these actions in your institution should be the director's and how far it might be delegated to other members of staff.

2. The minister of health and the minister of agriculture, of the country in which the People's Education Centre (PEC) is situated, have recently returned from a visit to China where they were very impressed by the fact that China has virtually eliminated dogs, and that they saw none in towns. Cabinet has ruled that an anti-dog campaign will be organised arguing that: (a) very few dogs are now used as guards to protect crops or herd animals (those that are will be exempt from the campaign); (b) outbreaks of rabies have been increasing; (c) in some towns, meat fit for human consumption is used for dogs and tins of dogfood are even imported, using scarce foreign exchange; (d) toxicaria canis is a significant health problem.

   The following agencies will be involved in the campaign, with the duties stated:

| | |
|---|---|
| PEC | co-ordination (and other duties to be agreed) |
| university extension | to be agreed |
| ministry of agriculture veterinary service | technical advice and rounding up of dogs |
| radio station | to make and broadcast programmes |
| army | to shoot dogs |
| central transport organisation | to distribute materials |
| community development department | field workers will set up study groups on the dog problem |
| ministry of health | technical advice |
| government printer | to print teaching materials |
| university faculty of sociology | research and evaluation |
| district councils | for local support |

Your task is to produce outline plans for the campaign, which will use radio, print and study-action groups. You will need to decide:

who will do what?
what staff are needed?
how will it be organised?

Smokers and dog lovers can, as an alternative to this exercise, work out plans for a health education campaign on smoking. In this case, remember to involve schools, as we want to discourage smoking among students and teachers; you do not need to involve the army, unless you want to reduce smoking among soldiers.

# Unit 8: Costs and budget

As managers we often have to make financial decisions. And we need to make administrative decisions which are affected by finance. The aim of this unit is to help with such decisions. To do so we need to be able to answer the following questions:

How do we decide on financial priorities?

How do we find out how each department and each course of our organisation costs?

How do we find out how much it would cost to run a new course?

If a course looks too expensive, what can we do about it?

How do we work out a budget for future expenditure?

We are therefore looking at ways of analysing costs and of using that information for budgeting, for financial management and management more generally. The unit will show how we can make such an analysis and give us practice in doing the calculations involved.

We have five specific objectives:

1. (for everyone) to be able to analyse the costs of an institution and so see how much particular activities cost;
2. (for everyone) to be able to use this information in budgeting for a distance-teaching institution or department;
3. (for everyone) to be able to see from an analysis of the costs how changes in a course or a project will affect its costs;
4. (for everyone) given a standard method, to be able to work out the costs of a particular course;
5. (for enthusiasts) to be able to improve the method.

## How do we decide on financial priorities?

We're likely to ask four key questions about costs.

Is distance teaching cheaper than conventional education?

Does it make financial sense to run a particular course or to use a particular teaching method?

How much does it cost to run any one department in our institution?

How do we forecast the costs of the whole institution for a given period of time?

The first of these is often answered before our own institution exists and is reflected in the decision to set up a distance-teaching unit. It must also be asked in relation to particular new projects in order to decide who runs them and how. It can only be answered, of course, if we can work out the real costs of that project by distance teaching and the real costs of it by conventional methods. Such information often does not exist or if it does it is very difficult to make the comparisons. We don't look at this question in any detail here. If you want to explore it further see our Broadsheet, The cost of distance education.

The second and third questions require us to break down the costs of our work. We will examine how to do this in the next part of this unit, pages 132 to 144. These sections concern how we choose to spend money on one part of our work rather than another. Thus they are about priorities. And, as educational priorities may be determined by financial ones, we cannot happily dodge financial issues. Thus it is necessary to analyse our costs if our budget is to be used most wisely; it is necessary if we are to allocate resources wisely to one project rather than another. And it is necessary if we are to compete for funds against other agencies and want to show that we can make good use of resources. On the other hand there are arguments against controlling finance too strictly: the unexpected, the speculative, the imaginative need to play a part in education, and tight financial controls may stifle them all. In practice everyone wants some leeway in his budget and many people will manipulate their budgets to provide this, even if reluctant to admit to the fact.

The fourth question relates to the administrator's most regular financial job, namely to prepare an estimate of how much money is needed by the institution for the next year. There is nothing peculiar about this: the techniques of budgeting for distance teaching are largely the same as they are for any other sort of public enterprise. There are usually three stages in working out a budget. First, we need to break down the proposed activities under headings. Next, we can calculate, with some precision, future expenditure and income for that part of our work for which costs and receipts are fixed in advance. Third, there are some figures which we have to guess; for example, for new activities or for programmes which are likely to expand.

Much of the rest of this unit shows us how to work out the costs of distance teaching. This sort of calculation is the starting point for measuring all four kinds of question.

### EXERCISE A

List in column (a) the headings which appear in the budget of your own institution (e.g. staff, printing, rent, office equipment). Do you think these headings tell you enough about the costs and income of your institution to be able to make financial decisions about what courses you should run, expand, cut down or abandon and to be able to draw up an accurate budget? If not, make another list, in column (b), of the kind of additional information about costs you think you would need in order to make such decisions. (If you do not know the headings which actually appear in a budget of a distance-teaching institution, just complete column (b) with a list showing the information you think necessary for an institution or proposed institution which is familiar to you.)

| (a) Actual headings | (b) Proposed additional information |
|---|---|
| | |

COMMENT

Different countries and different institutions require different budget formats, so we cannot say exactly what budget headings your institution has. It is likely, however, that they may include:

| Income | Expenditure |
|---|---|
| Government grant | Salaries and fees |
| Student fees | Printing and stationery |
| Special projects grant | Books, instructional materials and equipment |
| | Rent, rates, office costs and services |
| | Transport and travel |
| | Equipment |

In order to be able to work out the actual figures for the expenditure headings and to make decisions about how to spend the money you have we think you also need to know:

the total cost of your institution's central administration;

the total cost of course production, divided into:
  the cost of formal courses;
  the cost of nonformal courses;

the total cost of radio production;

the total cost of evaluation;

the total cost of publicity.

In order to establish these total departmental costs you will also need to know how they are made up, which involves analysing:

salaries and fees for each department/section (including regional or field officers);

salaries and fees for each category of part-time or temporary staff (e.g. writers, tutors);

printing costs per volume of stated size and for different lengths of print run;

number of volumes, students, etc., per course;

proportions of rent/office space required for each function or department;

amount of travelling and transport costs per department and per course;

equipment costs per department, per course, per medium.

These all involve breaking down the costs in different ways. There may well be other details you will need which we have not thought of, but we think these are the most obvious items. And they illustrate the need for a more profound analysis of costs and the ability to break them down.

How do we find out how much each department and each course costs?

We shall try to answer the questions about costs first for the People's Education Centre (PEC), and then ask you to work out the costs for your own institution, or for another existing institution for which information on costs is available. Here are the basic facts about PEC.

People's Education Centre

As we saw in Unit 6, the People's Education Centre is a distance-teaching institution which uses both correspondence and radio. It also runs an experimental project in rural education and has a research unit of its own. It works in People's $$, whose value lies between the US $ and the £ sterling. It is financed partly by student fees, partly by government grant, and partly by a special grant for its rural project.

PEC's courses are mainly but not entirely written by outside authors, and it employs part-time tutors who are paid fees for marking its students' work. As a semi-government institution it does not have to pay postage. It prints its own courses.

In 1979 - the year for which we have accounts - it had 10 000 enrolments; offered 7 radio series, for which the national broadcasting service met production and transmission costs; printed 45 250 volumes of correspondence texts; and ran its own vehicles, which travelled 18 027 km in total.

A substantial number of PEC students drop out of their courses. In two-volume courses, only three-quarters of the students go on to volume 2. In three-volume courses, three-quarters go on to volume 2, but only three-fifths go on to volume 3.

To make any sound financial plans, or to use financial control as a way of managing the Centre effectively, we need to break down the costs. We have to see, for example, how the Centre is spending its money before we can calculate the cost of a single course. Later on, we shall see how PEC can make financial decisions about a new, proposed course. But we start by analysing its total budget.

In 1978, PEC's administrator worked out its budget for 1980, using the approved government headings. This budget gave a forecast of what it would receive and spend in 1980. PEC's agreed budget for 1980 was:

| Income | P $ |
|---|---|
| Government grant | 52 000 |
| From student fees | 141 000 |
| Experimental project grant | 60 000 |
| Total | 253 000 |
| **Expenditure** | |
| Salaries and fees | 96 662 |
| Instructional materials and services | 70 175 |
| Rent, rates, office costs and services | 14 109 |
| Transport | 6 613 |
| Maintenance of equipment | 4 942 |
| Purchase of equipment | 10 800 |
| Direct experimental costs | 49 160 |
| Total | 252 461 |

By remarkably good management, PEC's actual expenditure turned out to be the same as this budget. This is unusual, but makes our job easier: often we get different results if we look at budgets - what people plan to spend - and actual expenditure - what they in fact spend.

To satisfy the government auditors PEC need only keep records of expenditure under the seven headings above. But this does not give the administrator of PEC enough information. She needs to know, for example, how much it costs PEC to print each course. And she needs to know whether the grant for the experimental project is in practice covering all the costs for the project. And so on. So what does she do? She wants to get the information that will help her planning, but without creating additional work.

The bookkeeper already keeps details of expenditure in rather more detail. His summary accounts for the year are in Table 1.

Table 1 Summary accounts for PEC (P$)

| | | |
|---|---|---|
| Salaries and fees | | |
| wages and salaries | 63 932 | |
| tutors' fees | 21 433 | |
| course writing fees | 8 370 | |
| pension scheme | 2 927 | 96 662 |
| Instructional materials and services | | |
| course printing materials | 34 811 | |
| residential courses | 4 140 | |
| books, tapes, kits | 5 234 | |
| general printing, stationery | 9 092 | |
| student handbook, guide, magazine | 14 959 | |
| sundry instructional services | 1 939 | 70 175 |
| Rent, rates, office costs and services | | |
| rent, rates, insurance | 7 094 | |
| heat, light, cleaning | 1 864 | |
| telephone | 3 498 | |
| bank charges and other fees | 1 653 | 14 109 |
| Transport | 6 613 | 6 613 |
| Maintenance of equipment | | |
| hire and maintenance | 1 574 | |
| depreciation | 3 368 | 4 942 |
| Purchase of equipment | 10 800 | 10 800 |
| Experimental project | 49 160 | 49 160 |
| Total | 252 461 | 252 461 |

This gives the administrator a bit more information, and enables the bookkeeper to see that he does not overspend on any heading. But it still does not tell us how much each department spends. To find this out, she asks the bookkeeper to break down the expenditure a bit more. PEC is organised in six sections: central administration; course printing and production; student services; radio; research; and projects. She starts by looking at the wages or salaries for each person in the centre. It is then easy to see what the salary bill is for each department. It is broken down like this.

(P$)

| | | Admin. | Course production | Student services | Radio | Research | Project |
|---|---|---|---|---|---|---|---|
| Wages and salaries | 63 932 | 15 982 | 21 310 | 5 328 | 7 992 | 5 328 | 7 992 |

We can now see how much of that total wage bill of nearly P$64 000 is spent in each department. It is fairly easy to go on and allocate some other costs to particular departments. The student service department, for example, is responsible for the teaching activities of the Centre. It looks after tutors and ensures that students' work is marked. So it is clear that tutors' fees are part of the expenditure of that department. Course writing fees and course printing materials are both required to produce new courses, so these costs belong to the course production department. Residential courses are run by the student services department. With this sort of knowledge we can continue to break down the expenditure under the same headings. The breakdown now begins to look like this.

(P$)

| | | Admin. | Course production | Student services | Radio | Research | Project |
|---|---|---|---|---|---|---|---|
| Wages and salaries | 63 932 | 15 982 | 21 310 | 5 328 | 7 992 | 5 328 | 7 992 |
| Tutors' fees | 21 433 | | | 21 433 | | | |
| Course writing fees | 8 370 | | 8 370 | | | | |
| Pension scheme | 2 927 | 2 927 | | | | | |
| Course printing materials | 34 811 | | 34 811 | | | | |
| Residential courses | 4 140 | | | 4 140 | | | |

If we go on like this, we get an analysis of costs as in Table 2. This already tells us a lot more than we had when the costs were only broken down as in Table 1. For the most part we can very quickly see that all the costs for a particular item belong under one heading. In other cases we can tell from the books that an item can be split between two headings or departments. The account books show, for example, that P$3 200 of the expenditure on books, tapes and kits was for tapes used by the radio section, so that item can be split as it is in Table 2. But we are left with a great many costs under general administration, because we don't know where to put them We can find where to put some of them without much difficulty. If we take transport as an example, we know that most of PEC's transport costs are the costs of running its own vehicles. Each vehicle has a log book and the log book shows which department has used the vehicle for a journey and how long the journey was. Once we know the total cost for travelling for a year (P$6 613) it is very easy to calculate a rate per kilometre and see how the transport costs should be shared between departments.

Table 2 First breakdown of PEC's costs (P$)

| | Sub totals | | Administration | Course production | Student services | Radio | Research | Project |
|---|---|---|---|---|---|---|---|---|
| Salaries and fees | 96 662 | | | | | | | |
| wages and salaries | | 63 932 | 15 982 | 21 310 | 5 328 | 7 992 | 5 328 | 7 992 |
| tutors' fees | | 21 433 | | | 21 433 | | | |
| course writing fees | | 8 370 | | 8 370 | | | | |
| pension scheme | | 2 927 | 2 927 | | | | | |
| Instructional materials and services | 70 175 | | | | | | | |
| course printing materials | | 34 811 | | 34 811 | | | | |
| residential courses | | 4 140 | | | 4 140 | | | |
| books, tapes, kits | | 5 234 | | | 2 034 | 3 200 | | |
| general printing, stationery | | 9 092 | 9 092 | | | | | |
| student handbook, guide, magazine | | 14 959 | | | 14 959 | | | |
| sundry instructional services | | 1 939 | | | 1 939 | | | |
| Rent, rates, office costs and services | 14 109 | | | | | | | |
| rent, rates, insurance | | 7 094 | 7 094 | | | | | |
| heat, light, cleaning | | 1 864 | 1 864 | | | | | |
| telephone | | 3 498 | 3 498 | | | | | |
| bank charges and other fees | | 1 653 | 1 653 | | | | | |
| Transport | 6 613 | 6 613 | 6 613 | | | | | |
| Maintenance of equipment | 4 942 | | | | | | | |
| hire and maintenance | | 1 574 | 1 074 | | | 500 | | |
| depreciation | | 3 368 | 3 368 | | | | | |
| Purchase of equipment | 10 800 | 10 800 | 10 800 | | | | | |
| Experimental project | 49 160 | 49 160 | | | | | | 49 160 |
| Total | 252 461 | 252 461 | 63 965 | 64 491 | 49 833 | 11 692 | 5 328 | 57 152 |

This is how it is done. The account books show that of the total expenditure on transport of P$6 613, the sum of P$484 was for public transport and the balance of P$6 129 for using PEC's own vehicles. The log books show that they travelled in total 18 027 km in the year. We can see that the cost per km was therefore (6 129/18 027) or P$0.34.

Next the administrator arranges for the log books to be analysed. They show the distance travelled for each department, thus:

| | km |
|---|---|
| Administration | 3 695 |
| Course production | 432 |
| Student services | 5 211 |
| Radio | 900 |
| Research | 4 027 |
| Project | 3 762 |
| | 18 027 |

If we multiply these figures by P$0.34, we then get a trarsport cost for each department:

| | km | | P$ |
|---|---|---|---|
| Administration | 3 695 | x P$0.34 = | 1 256 |
| Course production | 432 | | 147 |
| Student services | 5 211 | | 1 772 |
| Radio | 900 | | 306 |
| Research | 4 027 | | 1 369 |
| Project | 3 762 | | 1 279 |
| | 18 027 | | 6 129 |

This sort of calculation enables us to improve the breakdown of costs in Table 2. We could change it, so that instead of showing the total transport costs under administration, we showed under administration just the $1 256 calculated above, and the $484 for public transport. (The public transport figure is so low that it is probably not worth the extra work involved in splitting it between departments.) This would, of course, also alter the totals. We would then substitute the amounts in Table 3 for the transport costs and total costs in Table 2.

Table 3 Changes to Table 2

| | | Admin. | Course production | Student services | Radio | Research | Project |
|---|---|---|---|---|---|---|---|
| Transport | 6 613 | 1 740 | 147 | 1 772 | 306 | 1 369 | 1 279 |
| Total | 252 461 | 59 092 | 64 638 | 51 605 | 11 998 | 6 697 | 58 431 |

The administrator does a somewhat similar calculation to discover how much it costs PEC to print a standard, 100-page, A4 volume. She knows that the total course production costs were P$21 310 for wages and salaries plus P$34 811 for course printing materials, making a total of P$56 121. The records kept by the production department show that during the year they printed 45 250 volumes. This gives her a cost per volume of (56 121/45 250) or P$1.24. Similarly, by looking at the number of volumes the editors deal with in a year, she can produce an average editing cost per volume - a figure we will need when looking at the cost for a proposed course.

Now you must do some calculations. If you have the accounts of your own institution, you can work out the cost of teaching a student, and the cost of producing a volume of a course from those figures. Or something similar. But if you have not, then work from the sums in Table 4. This is a summary of the National Extension College's expenditure in 1978.

Table 4 National Extension College expenditure 1978 (£)

| | |
|---|---|
| Salaries, wages, pensions | 78 500 |
| Tutors' fees | 25 900 |
| Course production | 74 100 |
| Books, tapes, kits | 5 600 |
| General printing | 9 900 |
| Advertising | 22 000 |
| Postage and telephone | 34 400 |
| Rent, rates, office costs | 10 900 |
| Travel | 3 300 |
| Maintenance, depreciation | 7 400 |
| Interest | 3 400 |
| Project expenditure | 66 300 |
| | 341 700 |

In that year the College had 8 500 enrolments on correspondence courses. Your job is to find out: (a) what it cost to teach each student (leaving aside the cost of administering the college, publicising it, producing courses and running its separate project) and (b) what it cost to produce each volume. You can assume it produced 12 000 volumes.

To work these out, divide NEC's expenditure between 5 sections: administration; publicity/advertising; course production; teaching; project. You can assume that salaries, wages and pensions, and postage and telephone costs were divided between departments, and that one third of course production costs were for the separate projects, like this:

(£)

| | Administration | Publicity | Course production | Teaching | Project |
|---|---|---|---|---|---|
| Salaries | 30 000 | 12 000 | 15 000 | 14 000 | 7 500 |
| Course production | - | - | 49 400 | - | 24 700 |
| Post/telephone | 7 000 | 12 000 | - | 15 400 | - |

## EXERCISE B

Draw up a table for NEC or your own institution like the one we used for PEC in Table 2. From this you can work out the teaching costs and production costs. Don't forget to make it clear what currency you are using.

| | Administration | Publicity | Course production | Teaching | Project | Total |
|---|---|---|---|---|---|---|
| Salaries and fees | | | | | | |
| wages and salaries | | | | | | |
| tutors' fees | | | | | | |
| course writers' fees | | | | | | |
| Instructional materials | | | | | | |
| course production | | | | | | |
| books, tapes, kits | | | | | | |
| general printing | | | | | | |
| Publicity | | | | | | |
| advertising | | | | | | |
| Office costs | | | | | | |
| rent, rates, etc. | | | | | | |
| bank charges, interest | | | | | | |
| post, telephone | | | | | | |
| Transport | | | | | | |
| Maintenance, depreciation | | | | | | |
| Project expenditure | | | | | | |
| Totals | | | | | | |

COMMENT

These exercises are quite useful. They tell managers something about their costs. They help us decide between alternative courses of action. They keep the pocket calculator industry in business. Your analysis of NEC's costs is the starting point for further work later in this unit.

But they only tell part of the story. Look back at Table 2: we are still left with P$63 965 out of a total of P$252 461, or 25% of the total expenditure, under the vague heading 'administration'. Even when we reallocated the costs of transport in Table 3, we were still left with P$59 092 (23% of expenditure) under administration. Often we want to know more precisely what this money was spent on. But we cannot divide up the administrator's time, or the cost of heating and lighting the building or paying rent, as easily as we could keep track of expenditure on vehicles. We therefore need to make some arbitrary decisions about sharing the administrative costs between departments. If we want, for example, to know how much our radio section costs, we need to take into account not only the costs of its own staff and its tapes, which are easily discovered, but also its share of the rent and of senior staff time. This is important if we are planning the future use of more radio and want to know the effect of it on our budget. Similarly, if we have a separate project fund, we need to be sure that it covers not only the project's direct cost but also the costs of the time other staff spend on it. And so we need to share out the administrative or overhead costs between departments.

We can do this in various ways. They are all based on guesses, and it is probably not worth spending a lot of time in subtle calculations. We can see how much each department spends, and then allocate the administrative costs between them in the same proportion. Or we can see how much floor space each department uses, and allocate the overhead costs in the same proportion. Or we can get staff together and get them to make the best possible guess as to how much of the organisation's energies go on one part of its work or another. This is what the administrator of PEC has done. The staff meeting decided that the energies of the Centre were divided in the following proportions between the five sections of the Centre other than the administrative section:

| | |
|---|---|
| Course production | 35% |
| Student services | 35% |
| Radio | 10% |
| Research | 5% |
| Project | 15% |

She can now see that the total cost of running each section is the total shown in Tables 2 and 3, together with the appropriate proportion of administrative costs. Thus, for example, she needs to add 35% of the administrative costs to the costs of the course production section in order to see the total cost of course production. Table 5, which summarises PEC's expenditure, shows the results of this redistribution.

Table 5 Revised breakdown of PEC's costs (P$)

| | Sub totals | Administration | Course production | Student services | Radio | Research | Project |
|---|---|---|---|---|---|---|---|
| Salaries and fees | 96 662 | 18 909 | 29 680 | 26 761 | 7 992 | 5 328 | 7 992 |
| Instructional materials and services | 70 175 | 9 092 | 34 811 | 23 072 | 3 200 | | |
| Rent, rates, office costs and services | 14 109 | 14 109 | | | | | |
| Transport | 6 613 | 1 740 | 147 | 1 772 | 306 | 1 369 | 1 279 |
| Maintenance of equipment | 4 942 | 4 442 | | | 500 | | |
| Purchase of equipment | 10 800 | 10 800 | | | | | |
| Experimental project | 49 160 | | | | | | 49 160 |
| Total | 252 461 | 59 092 | 64 638 | 51 605 | 11 998 | 6 697 | 58 431 |
| Redistribution of administrative and overhead costs | | - | 20 682<br>(35%) | 20 682<br>(35%) | 5 909<br>(10%) | 2 955<br>(5%) | 8 864<br>(15%) |
| New total | 252 461 | - | 85 320 | 72 287 | 17 907 | 9 652 | 67 295 |

This is a very crude calculation. It does not for example, separate capital expenditure on equipment from recurrent expenditure. But crude calculations have their merits. These ones tell us a number of things which the administrator wanted to know and which help her in managing PEC. Here are three examples.

We know that PEC prints 45 250 volumes a year and we had previously assumed that these cost P$1.24 per volume to produce. Now this figure may be all right for some of PEC's internal calculations. But when PEC is going to produce volumes for an outside organisation it is important for it to charge enough. It must recover a proportion of its overheads for this work. And the calculations in Table 5 show that the full cost per volume is more like 85 320/45 250 or P$1.89.

PEC receives a grant from the government which is meant to cover the cost of its student services. That grant is for P$52 000. But the department demands a lot of management time, and a fair amount of office space, which were not allowed for in the original grant calculations. We can now see that the grant is not covering the full student service costs. As a renewal of the grant is being negotiated, the PEC administrator is in a stronger position to argue for it to be increased.

Now look again at your analysis of NEC's costs for 1978. You probably have totals like this:

| Admin. | Publicity | Course production | Teaching | Project | (£) Total |
|---|---|---|---|---|---|
| 71 900 | 46 000 | 64 400 | 60 900 | 98 500 | 341 700 |

A group of NEC advisers recently reconsidered its expenditure for 1978 and decided that the administrative and overhead costs could be allocated like this:

| | |
|---|---|
| Publicity | 15% |
| Course production | 40% |
| Teaching | 30% |
| Project | 15% |

They also agreed that 90% of the publicity costs should be allocated to teaching and 10% to the project.

### EXERCISE C

Now reallocate NEC's costs or the costs of your own institution and calculate the revised cost of teaching a student and the revised cost of producing a course. This exercise is slightly more complicated than the one we did to produce Table 5. You will need to reallocate the costs in two stages. First, reallocate the administrative costs to all the other headings. Then, as a second stage, reallocate the publicity costs.

| | Administration | Publicity | Course production | Teaching | Project | Total |
|---|---|---|---|---|---|---|
| Salaries and fees | | | | | | |
| wages and salaries | | | | | | |
| tutors' fees | | | | | | |
| course writers' fees | | | | | | |
| Instructional materials | | | | | | |
| course production | | | | | | |
| books, tapes, kits | | | | | | |
| general printing | | | | | | |
| Publicity | | | | | | |
| advertising | | | | | | |
| Office costs | | | | | | |
| rent, rates, etc. | | | | | | |
| bank charges, interest | | | | | | |
| post, telephone | | | | | | |
| Transport | | | | | | |
| Maintenance, depreciation | | | | | | |
| Project expenditure | | | | | | |
| Totals | | | | | | |

COMMENT

You can now see the dramatic effect of bringing in all the costs: an effect much greater than you would find in orthodox education, where staffing costs alone amount to between 65% and 80% of the total in many schools. If you did the NEC exercise, for example, you will see that this change more than doubles the cost of teaching a student, leaving aside the cost of producing courses. As the production department makes more modest calls on the rest of the organisation and does not require publicity its costs rise less dramatically.

How do we find out how much it would cost to run a new course?

The calculations we have done enable PEC to work out how much it will cost to run a proposed course. We look now at the way PEC does this. We are concentrating on a correspondence course by way of example, but similar methods could be used for the use of radio, or for a different style of course.

PEC wants to decide whether to offer a new course. It will be on revolutionary literature. There is a demand for the course and it would fill a gap in PEC's list of courses. But it is not PEC's highest priority. So the PEC administrator works out how much the course will cost. This is how she does it.

First, she gets the best possible answers from her colleagues to the following questions:

How long a course will it be?

How many assignments (for marking) will it have?

How much will tutors be paid to mark each assignment?

How long will the course be used before it is changed?

How many students a year will enrol?

What will they be charged?

How many of them will drop out before completing the course?

(If PEC had to pay for postage, she would also need to ask how much it would cost to post lessons to students.)

Some of the answers she gets are guesses but they are the best we can do. They are based on PEC's experience of similar courses.

Next she works out how much it will cost to pay the author. Here she can get a more accurate figure: the course is to be written by an outside author and the proposed fee is based on what PEC usually pays. Then she needs to calculate the cost of editing, designing and setting the course. She knows how much it costs to edit a volume of a particular length, and how much it costs to design it and set it in type. She also knows how much paper costs. So she can work out these production costs. This is the kind of calculation made on p.137 above.

After these calculations she can work out the annual cost. Revolutionary literature is to be used for four years. She can therefore see that the annual cost of running the course is made up of four elements:

a quarter of the author's fee;

the cost of printing one year's supply of the course;

payment to tutors for marking one year's work by students;

overheads.

The first three of these are quite straightforward. As for the fourth, there are, as we saw, various ways of calculating overheads. PEC has adopted a very simple approach for costing courses. It has argued that correspondence students should generate enough income to pay half the administrative costs together with half the costs of the student services section. From Table 5 we can see that these costs are:

| | (P$) |
|---|---|
| Administrative costs | 59 092 |
| Student services | 51 605 |
| | 110 697 |

The cost of tutors' fees has to be deducted from this figure, as we can calculate more accurately how much tutors will cost for a particular course. This then gives us the following total figure to be allowed for overheads:

| | (P$) | |
|---|---|---|
| Admin. and services (from above) | 110 697 | |
| less tutors' fees | 21 433 | |
| | 89 264 | ÷ 2 = 44 632 |

(In the light of the discussion on pages 137-140 above, we could work out a better way of calculating overheads. But this crude approach has given PEC an accurate enough idea for the calculations.) PEC expects to have 10 000 subject enrolments a year. The overheads have to be shared between these 10 000. Thus the administrator wants to recover $44 632/10 000 or $4.46 from each subject enrolment for her overheads.

Now look at Figure I on pages 146 and 147. On the left is PEC's standard costing form, completed for the proposed course in revolutionary literature. On the right, we explain how PEC's administrator has worked out the costs for the course. The notes are numbered to correspond with the numbers in the right-hand margin of the form. Work through both pages carefully, so that you can see how she reaches the annual cost and the annual income.

### If a course looks too expensive, what can we do about it?

If the course is produced as planned, PEC will lose an estimated P$392 a year on it. The estimate may be wrong, but it is the best we can do. It faces PEC with the following choices:

it can go ahead with the course, in effect subsidising it from other funds;

## FIGURE I - Course costing

Notes

Title Revolutionary Literature Length 300 pp A4 1,2

Assignments (a) 16 Marking fee (f) 0·75 3,4

Life (y) 4 years Annual enrolment (e) 250 5,6

Proposed fee (p) 18 Overheads per student (h) 4·46 7,8

Annual text usage volume 1 (e) 250 9

volume 2 (3/4 e) 190 10

volume 3 (3/5 e) 150 11

Total (u) 590 12

### Production costs

Author's fee 420 13

Edit, design, set 960 14

Total generation costs (g) 1 380 15

Printing (y × u × print cost per volume) (r) 2 926 16
(4 × 590 × 1·24)

### Annual costs

Generation cost (g/y) 1380/4 345 17

Print cost (r/y) 2926/4 732 18

Tutors' fees (0.6 × a × f × e) (0·6 × 16 × 0·75 × 250) 1 800 19

Overheads (e × h) (250 × 4·46) 1 115 20

Extra costs (e.g. radio) 21

TOTAL ANNUAL COST $\boxed{3\ 992}$

Annual fee income (0.8 × e × p) 3 600 22

## Notes to Figure I

1. PEC education staff give the title of the course.
2. They determine its length: at 300 pp it will have 3 volumes.
3. They say how many assignments it needs.
4. Tutors on comparable courses are paid $0.75 for each assignment.
5. The course may get out of date in 4 years.
6. Similar courses attract about 250 students a year.
7. They usually cost about $18.
8. Overheads are calculated as discussed on pp. 143-144.
9. All students will get volume 1 so 250 copies are needed.
10. But dropouts mean that only 3/4 will go on to volume 2.
11. 3/5 will go on to volume 3.
12. This is therefore the total number of volumes to be printed.
13. Authors of similar courses are paid $420.
14. Analysis of PEC costs shows that it will cost this to edit the text, design it and set it in type.
15. The total costs for generating the course, to the point where it is ready for printing, are the total of these two costs.
16. It costs PEC $1.24 to print a 100-page volume, including paper costs. The total print costs are 1.24 multiplied by the annual number of volumes and by the 4-year life of the course.
17. The annual costs include 1/4 of the generation cost (as it is to run for 4 years).
18. They also include 1/4 of the print cost.
19. Tutors' fees: from past experience PEC knows that students do not do all the assignments. They usually do 60% of them. So the tutors' fees are 60% of the total number of assignments multiplied by the marking fee and by the number of enrolments.
20. Overheads - the rate per head multiplied by the number of enrolments.
21. Sometimes there will be extra costs - if there is any extra expenditure which arises just because of this course. There are none for Revolutionary literature.
22. Some students do not pay all their fees, and some get refunds. From experience PEC knows that the actual fee income is therefore likely to be only 80% of the proposed fee multiplied by the annual enrolment.

it can abandon the plans for the course;

it can make changes to the outline plan for the course in order to produce a different financial result.

The PEC administrator looked at four different ways of producing a better financial result. She considered:

1. Increasing the student's fee by P$2. From previous experience this would result in a 5% reduction in enrolment. Thus, for this option, the student's fee would be P$20 and the enrolment 237.
2. Making the course shorter so that it had only 2 volumes and 12 assignments. This would reduce the printing costs, the marking fees and the cost for editing, designing and setting. PEC authors argue that it would cost as much to write as a longer course and the treasurer thinks that he can still charge P$18 for the course. (In calculating the number of copies to be printed, the administrator assumes that three-quarters of the students will still go on from volume 1 to volume 2.)
3. Making moe modest changes by prolonging the life of the course from 4 to 6 years, cutting the number of assignments from 16 to 15 and the marking fee from $0.75 to $0.65.
4. Running a publicity drive for the course which would cost an additional $500 but double the enrolment from 250 to 500 students.

### EXERCISE D

Using the same format as Figure I, you can now calculate the effects of all these changes if you want to, using the form on p.149. Which would you choose? You may decide, when you have done the calculations, that your choice between alternatives has now to be on educational rather than financial grounds.

## COURSE COSTING

Title ........................ Length ........................

Assignments (a) ..............

Marking fee (f) ...............

Life (y) ................years Annual enrolment (e) ..........

Proposed fee (p) ............. Overheads per student (h) .....

Annual text usage volume 1 (e) .........

volume 2 (3/4 e) .....

volume 3 (3/5 e) .....

Total (u) ............

### Production costs

Author's fee ..........................

Edit, design, set .....................

Total generation costs (g) ..................

Printing (y × u × print cost per volume) (r) ..................

### Annual costs

Generation cost (g/y) ........................................

Print cost (r/y) ..............................................

Tutors' fees (0.6 × a × f × e) ...............................

Overheads (e × h) ............................................

Extra costs (e.g. radio) .....................................

### TOTAL ANNUAL COST

Annual fee income (0.8 × e × p) ...............................

Next, the administrator looked at a more radical proposal: to add a radio component to the course. In PEC's discussions on this it was argued:

1. Providing a radio component would cost PEC P$1 670. This is the figure omitting overheads; we are using that figure because the administrator has already decided to recover the overheads by including the figure of P$4.46 discussed on p.145. This represents one seventh of the annual expenditure on radio, or one seventh of the $11 692 shown in Table 2, as PEC normally produces seven radio series a year. Of course there are far greater costs in making radio programmes, but the other costs are met by the radio station and not by PEC.

2. A course linked with radio would attract 1 250 students. 250 of these would be students who would have enrolled with PEC anyhow, and who might have enrolled for a different course if Revolutionary literature had not been available. Thus adding a radio course of this kind would increase PEC's total number of students from 10 000 to 11 000. PEC could look after this many students without increasing staff or office accommodation. As a result the overheads of P$44 632 which were previously shared between 10 000 students are now shared between 11 000. The figures for overheads per student enrolment thus fall from P$4.46 to P$4.06.

3. A more popular radio course should be shorter, with 2 volumes and 12 assignments.

4. PEC would like to reduce the enrolment fee to P$16.50.

EXERCISE E

Now work out the financial effects of doing the course with a radio component. Use Figure II (p.151) to help you. We have started to complete it. You must finish it.

COMMENT

The purposes of Exercises D and E is to show how costing can help the manager. PEC's costing form is not, of course, the only way of working out the costs of a course. But we think you will need some sort of form like this to help you make choices about your budget.

EXERCISE F

You can now, if you want, draw up a better costing form for your institution on a separate sheet of paper. You may want, for example, to treat overheads differently. Or you may want to bring into the form the costs of any face-to-face teaching you offer. Or you may be able to change it so that you can more easily see the effects of increasing or reducing fees, or the length of the course, or changing some other variable.

COMMENT ON EXERCISES E AND F

We'd draw two general conclusions from these exercises. First, you can see that many of the costs in a distance-teaching institution are fixed, in the sense they do not go up or down with a larger or smaller number of students. The generation costs and the overhead costs form

FIGURE II - Cost of revolutionary literature with radio

COURSE COSTING

Title Revolutionary Literature ........ Length 200pp A4 ........

Assignments (a) 12 ........ Marking fee (f) 0·75 ........

Life (y) 4 ........ years Annual enrolment (e) 1250 ........

Proposed fee (p) ........ Overheads per student (h) 4.06

Annual text usage volume 1 (e) ........

volume 2 (3/4 e) ........

volume 3 (3/5 e) ........

Total (u) ........

Production costs

Author's fee ........

Edit, design, set ........

Total generation costs (g) ........

Printing (y × u × print cost per volume) (r) ........

Annual costs

Generation cost (g/y) ........

Print cost (r/y) ........

Tutors' fees (0.6 × a × f × e) ........

Overheads (e × h) ........

Extra costs (e.g. radio) ........

TOTAL ANNUAL COST ☐

Annual fee income (0.8 × e × p) ........

a significant proportion of the costs in all the alternatives considered above.

Second, having done the calculations, we are often forced back to making decisions on educational, social, or political criteria, not on financial ones. If we look at different ways of doing a course and find that their financial results are very similar, we cannot decide which way to choose on financial grounds. Small differences are meaningless, as we are working from estimates. In the case of Revolutionary literature, for example, we can get the following results:

| Course | No. of students | Financial results |
|---|---|---|
| Original plan but fee of P$20 | 237 | loss P$7 |
| Lower tutors' fees, 2 volumes with 12 assignments, fee P$18 | 250 | gain P$325 |
| Course with radio, but with course fee dropped to P$16.50 | 1 250 | loss P$27 |

These are all so similar that it would be absurd to choose between them solely on financial grounds. We have, instead, to consider the educational arguments about educating fewer people, at a higher fee, or more people on a shorter course, or very many more people on a shorter course and with radio - thus stopping us using radio for something else.

All that we have done so far has been in an attempt to help managers decide. The point of the calculations is to help make better decisions, within a distance-teaching institution.

## How do we work out a budget for future income and expenditure?

So we come back to where we started. The most regular and perhaps the most important financial job for an administrator is to work out the institution's annual budget: how much money will it need for its various activities and departments and where can it hope to get that money? We said earlier, on page 130, and we stress it again, that most of the techniques of budgeting for distance teaching are the same as for other kinds of institutions. We listed there the three stages in working out a budget. Let us look at them again in more detail.

1. We need to break down the costs of the proposed activities under headings: salaries, rent, office supplies, equipment, transport and so on. Often the headings will be determined by the administrative system within which the institution has had to work; they will be the headings laid down by our parent body, and will often be of the kind shown on pages 131-132; they remain the same from year to year, and are similar to those used by other similar institutions.

2. Next we need to calculate with as much precision as possible future expenditure and income for that part of our work for which we have clear and reliable guidelines. If we pay rent for our offices, for

example, we can very easily see how much to include for next year. Similarly, if we have already negotiated a grant for part of next year's work, there is a definite, known, sum to include under income in our budget.

3. Third, we have to make some informed guesses about those parts for which we do not have clear information or guidelines. In a new organisation or for a new project it is often difficult to forecast how rapidly things will grow. But it is usually possible to make reasonably reliable estimates. If, for example, we have to forecast transport costs for a new activity, we can guess at these in one of three ways. We can take the present transport costs and multiply them by what seems a reasonable factor to cover the expansion of our activities. Or we can work out approximately how many journeys of approximately what length we are likely to do and calculate the costs on that basis. Or we can find the costs for an organisation comparable to our own, adjust them to our own circumstances, and work from there.

CASE STUDIES

Now read Case Studies 28 and 29.

In the next few paragraphs we shall not look at budgeting techniques which are common to most organisations. We shall concentrate on a few considerations which apply especially to distance-teaching institutions, drawing on the examples contained in these case studies.

You should be able to see from the case studies that the techniques of detailed cost calculations described in this unit are valuable techniques in budgeting. In the Sudan proposal, for example, these have been used to calculate the costs per student per course of the different kinds of activity. An important reason was to make it possible to apply to different agencies for support for different programmes and, in some cases, to apply for support for a given number of students. In Lesotho a similar approach is used when working out how much its various service agency activities cost and therefore how much it should charge. This also helps the agencies served by LDTC to budget for their distance-teaching projects. In most budgets it may not be necessary to give the detailed breakdown by department, by students, or by course. It is, however, usually necessary to have done the detailed costings first in order to arrive at figures for the general budget headings.

These examples also re-emphasise the need to have a method of calculating the overhead costs - general administration, rent, office services and so on - of individual projects. If we cannot do so we cannot include a reasonable proportion of these overhead costs in applications for financial support, or in working out the fees we should charge students for those courses we cannot or do not want to subsidise. It is also a useful guide to calculating the additional overhead costs, in cash, personnel and resources, of adding new courses or new projects to our programme.

A complication in budgeting for a distance-teaching project is to calculate the costs of part-time staff. These may include fees for part-time writers and for part-time tutors and counsellors. The first are comparatively straightforward if you know in advance the courses you intend to produce each year. You can then estimate the number of course units or sections and multiply that by an agreed and acceptable fee for each unit. It is more difficult to know in advance how many students will be enrolling for each course, and how many assignments each will complete. Such an estimate determines the numbers of part-time tutors required and the fees they will need to be paid. You must remember two things: first, you must base your estimate on the maximum realistic number of enrolments; secondly you must assume that not all of them will keep up their studies, so you need to allow for an average rate of dropout. We saw how this was done for the PEC on page 147. The basis for both these calculations will be agreed fee rates per written unit or per marked assignment. These rates inevitably vary widely from country to country. Two guidelines, however, may be useful: the fee rates per hour for part-time evening class teachers which apply in the country and at the level concerned, and the rates per script paid by local examining councils. Part-time tutor and writer fees should be significantly higher than the latter, and about the same as the former. You must then estimate how long a tutor will take to mark and comment on each script or a writer to write a unit. In both cases it is advisable, if you can afford it, to make a generous estimate, so as to ensure that tutors give careful consideration to individual students' requirements, and that writers are prepared to rewrite or revise what they have written as advised by the editor.

In all such estimations it is extremely difficult to predict the amounts you will need. A crucial part of budgeting is therefore the art of approximation. This becomes easier each year, but even for a new institution, as we have suggested, guidance can be obtained from similar institutions at home or in nearby countries. It is important to allow for inflation and contingencies, so it is better to err on the side of overestimation, rather than to underestimate and then to have to cut back on a programme already launched. Because of the need to approximate, it is useful to ensure some flexibility so that money can be switched, within reason, from one item to another. For example, it is useful if money saved on part-time tutors can be available to cover unexpected writing costs, or the salary of an unfilled part-time subject post can be used to commission a course in the same subject from a part-time writer. This means that a distance-teaching institution will benefit if it can negotiate with its parent body the right to switch sums between budget headings. However, under some financial systems this will not be possible.

## What have we learned?

1. Costing is not mysterious.

2. Intelligent guesswork is better than struggling in the dark and hoping the costs will come right.

3. It is possible to work out the probable expenditure and income for a particular course, and for a particular department in a distance-teaching institution.

4. To do that we need some wider analysis of a distance-teaching organisation's costs.

5. Such an analysis can be made fairly easily, without creating additional work, on the basis of records necessarily kept by the institution.

6. It always raises questions about how to deal with overheads.

7. Now we have looked at them we can see that there is often a danger of

under-estimating costs.

8. Costing enables us to draw up a reasonably accurate budget for a distance-teaching institution, or for specific distance-teaching projects.

ASSIGNMENT 8

1. Either work out what you consider the most important unit costs for your own institution, if you have the necessary data, such as the annual cost per student taught, the cost per volume printed and distributed or the cost per successful student.

   Or look back at Table 4 and Exercise B. Calculate and consider the effect on NEC's finances of (a) increasing the number of students by 20% and (b) reducing them by 20%, assuming that overheads remained the same in both cases.

2. Draw up a budget for a rural forestry project to be run by PEC. It expects to have 20 000 participants, working in groups. Each group will receive a 40-page handbook and listen to six radio programmes (i.e. a radio series one third of the length of most PEC series). Local support and training of group leaders will be carried out and paid for by the ministry of agriculture. These costs, and those of the trees to be planted, will not be reflected in PEC's budget.

   Assuming each participant plants three trees, of which two survive, calculate the cost to PEC per tree planted and per surviving tree.